

2014

Building a Professional Learning Community at the University Level: A Case Study of an Information Fluency Initiative

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Suggested Citation

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BUILDING A PROFESSIONAL LEARNING COMMUNITY
AT THE UNIVERSITY LEVEL: A CASE STUDY OF
AN INFORMATION FLUENCY INITIATIVE

by

Susan Bennett Slavicz

A dissertation submitted to the Doctoral Program Faculty in
Partial fulfillment of the requirements for the degree of
Doctor of Educational Leadership

UNIVERSITY OF NORTH FLORIDA
COLLEGE OF EDUCATION AND HUMAN SERVICES

Spring, 2014

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Acknowledgments

A synonym for acknowledgements is credit. I find at the end of the dissertation process, credit is certainly a more appropriate word than acknowledgements.

I must give credit to many people who have helped me during this process. To the Hobbits led by Sally Nielsen, thank you for serving as my reading audience. To Bill Ganza and Jeff Hess, thank you for your advice while helping me navigate the doctoral process. To friends and colleagues who have given me encouragement, thank you for supporting me in this adventure.

Mom, Dad, and the rest of the “Bennett clan,” thank-you for believing in me and supporting me.

Melissa, thank you for showing me what is truly important in life by giving me two beautiful grandchildren during this process.

Michael, thank you for welcoming me into your home while completing my research.

Thanks to my dissertation committee, Tim Donovan, Warren Hodge, and Jennifer Kane for your very helpful and constructive suggestions.

Ellie, my dissertation chair, I credit you with the almost impossible task of focusing my work and turning a sloppy thinker into a doctoral candidate. Your devotion to us, your students, and to your profession is a reminder that the work ethic is alive and well!

Ed, you fixed printers, cleaned house, and fed both Ellie and me. In general, you made the dissertation possible. When I accept my diploma, I accept for both of us.

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ABSTRACT

An examination of the research regarding the problems associated with student academic writing indicated that two abilities, writing abilities and information literacy skills, intersect, and that an accepted term for this intersection is information literacy. The University of Central Florida's Information Fluency Initiative recognized information literacy as a key component in developing students' information fluency skills. This qualitative case study of the initiative used semi-structured interviews, study of documents, and observations to gather data in order to describe how the university planned, developed, and implemented the initiative. Study of relevant literature, narrative analysis (Tierney & Lincoln, 1997), inductive analysis (Hatch, 2002) and the elements of educational criticism (Eisner, 1998) informed the analysis of data.

Participants in the Information Fluency Initiative identified as successful the creation of online information literacy modules by librarians and faculty, program-wide efforts to embed information fluency into curriculum, and individual faculty projects. Additionally, the initiative encouraged a scholarly approach to the study of information fluency with the implementation of an annual Information Fluency Conference held at the University of Central Florida and publication of a peer-reviewed *Information Fluency Journal*. Results from the study suggested that administrative support for the initiative and the leadership's empowerment of faculty and librarians to undertake leadership roles were important factors in the initiative's success. Results also suggested that collaboration between faculty, librarians, and instructional technologists to construct curriculum produced a professional learning community that proved valuable to participants both professionally and personally.

CHAPTER 1

INTRODUCTION

Our learning comes from interpretation, our disciplines grow by argument, our communities cohere through discourse, and our ideologies are structures of persuasion. Reality itself is a function of the way we use language. (Bizzel & Herzberg, 2001, p. 15)

Writing is more than a skill set for using and forming sentences and paragraphs. The most difficult papers for teachers to evaluate are often those grammatically correct, perfectly formed essays that have little substance. Achieving substance, especially in college papers, however, often requires that students build upon the ideas of others and use information they locate through research.

A term often used in today's institutions is "life-long learning." College graduates are expected not only to develop knowledge in their fields, but also to develop their abilities to add to their knowledge independently. This ability to evaluate information critically has become increasingly important in our technological and information age. College professors and future employers expect students to locate, evaluate, and ethically use information in order to develop their own knowledge (Allen, 2007; Breivik & Gee, 2006; Nazari & Webber, 2011; Rockman, 2004). The modern principles of constructivism suggest that students must be actively engaged in the act of creating knowledge and that they construct meaning based upon how they add the new knowledge to their experiences or schema (Bruner, 1996; Novak, 2020). Further, writing is a window through which students communicate that knowledge. A fundamental question is what knowledge do college students build upon when they enter the academic community? In contrast to previous generations who learned from a print environment, most of today's students approach research and academic writing from their online search experiences. Easy access to

information in our technological age allows students to “Google” a term and discover more information in minutes than the previous method of researching for hours in the library. Has easy access to information significantly improved student writing, especially academic writing that needs to make use of these sources, or has student reliance on online sources led to problems regarding thoroughness and vigor in their writing? In spite of such ready access, faculty and librarians express concerns regarding the quality of material accessed and the understanding of content students develop from the sources they access (Breivik, 2005; Burkhardt, 2007; DaCosta, 2010; Howard & Davies, 2009; Nichols, 2009). Specifically, the easy access to information may preclude people’s reading closely, understanding context, and grasping meanings.

Statement of the Problem

Student reliance on Internet sources has led to faculty concerns regarding the quality of student writing (Burkhardt, 2007; Howard, 2007; Neely, 2002; Walker, 2008). The technological age with its easy access to information does not always lend itself to the type of thoughtful reflection that allows a writer to integrate the ideas of others into his or her own piece of writing. Through new technologies, faculty and students as academic writers have many choices to make when striving to communicate those intellectual thoughts. Faculty have choices of writing tools—what type of computer should be used? Do scholarly writers use hypertext? Do they place electronic files into electronic portfolios only to be accessed electronically? Academic writers also have choices for how to research—do they go to the library and read books and journals? Do they access databases? Do they Google search? When writers find an online article to use in a research project, how do they use the information within their own work? Scholars know that use of online sources in a paper requires citations and documentation, but often students do not (Howard & Davies, 2009; Neely, 2002).

Although students increasingly use electronic sources, that use is often problematic (Davis, 2002; Owunwanne, Rustagi, & Dada, 2010; Neely, 2002). For instance, almost 30% of the students in one study self-reported plagiarism from the Internet (Owunwanne et al., 2010). In another study, term papers submitted from 1996 through 1999 by undergraduates taking an Introduction to Microeconomics course showed a marked increase in Web and newspaper references with a decrease in citations for books (Davis, 2002). Further examination of the papers in the latter study, however, revealed that although the number of citations from 1996 to 1999 grew, the percentage of scholarly sources declined. Further, when papers from the year 2000 were examined, these researchers found that only 65% of the web references pointed directly to the web page while 16% of the pages could not be found (Davis, 2002, p. 58). Such results are an indication of several possible problems. First, students may lack a clear understanding of documentation techniques. Students might also simply make up web references. Finally, students may have difficulty discerning appropriate scholarly sources when confronted with the vast number of web sources.

Although students indicate confidence in using these electronic sources for research, assessments of that ability demonstrate that they are often unable to use those sources correctly and appropriately (Burkhardt, 2009; Hignite, Margavio, & Margavio, 2009; Neely, 2002). Students may appear to be electronically competent with their iPhones and mp3 players, but they lack ability to use the more sophisticated electronic research tools available in college libraries (Breivik & Gee, 2006; Burkhardt, 2007; Rockman, 2004). In fact, students often lack the critical thinking skills necessary to evaluate, assimilate, and use these electronic sources (Neely, 2002; Walker, 2008).

Inaccurate use of source material in writing often matches up with the existence of plagiarism and seems to contribute to increasing reports of plagiarism in colleges (Brown, Dickson, Humphreys, McQuillan, & Smears, 2008; Owunwanne, Rustagi, & Dada., 2010; Howard & Davies, 2009). These reports of plagiarism might indicate a broader acceptance of cheating on the part of students. If this is the case, to protect their own reputations and those of their students, institutions must find ways to deter those students. On the other hand, the increase in plagiarism might indicate that students lack the fundamental knowledge needed to incorporate source material into their writing. If students plagiarize because they lack knowledge, solutions to the perceived deterioration in students' writing abilities may lie in clearer instructions for the use of sources in an increasingly complex information environment. With the advent of electronic databases and the Internet, the American Association of College and Research Libraries (ACRL) began serious discussions concerning the best methods to develop curriculum to improve students' abilities to use these sources (Saunders, 2008). The ACRL defined the abilities needed for finding, evaluating, and using sources in our technological age as information literacy (American Association of College and Research Libraries [ACRL], 2000). Since the ACRL published its standards for information literacy, that term has been commonly accepted by universities and accreditation agencies (Saunders, 2008).

Faculty in colleges and universities recognize that improving the information literacy of students can improve their writing (DaCosta, 2010; Gullikson, 2006; McGuinness, 2006). In order for students to learn to work with source material, they must be able to locate that material and determine the validity and reliability of a source. Although faculty recognize the need for helping students improve their information literacy, faculty do not always understand the nature of those skills nor how students learn them (DaCosta, 2010; Gullikson, 2006). For example, the

results of one qualitative study revealed that faculty often thought that students acquired the abilities to use and evaluate sources “gradually and intuitively, through participation in a number of different scenarios” (McGuinness, 2006, p. 580). Librarians, too, have suggested that faculty’s perceptions of how students gain information literacy skills is one of “osmosis” for students rather than of strategy (DaCosta, 2010, p. 218). For instance, in DaCosta’s (2010) study, 98% of the faculty either strongly agreed or agreed that students needed to be information literate (DaCosta, 2010). However, in this study only 58% of the faculty reported using any measures to teach or assess these abilities. Further, research suggests that some faculty have little understanding of the nature of information literacy beyond using technology to identify sources (DaCosta, 2010; McGuinness, 2006; Rollins, Hutchings, Goldsmith, & Fonseca, 2009). Because faculty and librarians may hold different perceptions regarding the complexities of developing information literacy, a shared understanding of information literacy would support any efforts to improve students’ research and writing abilities.

Helping students write academically has never been easy. Although computers have expanded abilities to access and gain knowledge, they have not simplified the research process. Instead, students are presented with an ever-increasing number of decisions. The process by which they must sift through the expanding amount of information available to them requires skills in evaluation. Although some sources say that millennial students come prepared with digital literacy skills, research suggests that these students are not always information literate (Breivik & Gee 2006; Burkhardt, 2007; Chen & Williams, 2009; Neely, 2002; Rockman, 2004). Students’ frequent misuse of sources, specifically from the Internet, has led researchers to seek greater understanding of the possible impact that a lack of information literacy is having on

students' writing (Auer & Kruper, 2001; Figa, Bone, & Macpherson, 2009; Lupton, 2008; Neely, 2002).

The increasing use of technology and the increasing availability of information add to the complexity of learning how to use sources and write for academic context (Howard, 2007; Neely, 2002; Schmelkin, Gilbert, Spencer, Pincus, & Silva, 2008). The roles of librarians and faculty in this new territory of information literacy increasingly complement or interact with one another. For example, studies of individual cases of collaboration suggest that student writing can be improved when information literacy is taught (Burkhardt, 2007; McAdoo, 2008). Faculty have found that embedding the librarian's presence into online courses has met with success (Bean & Thomas, 2010; Figa, Bone, & Macpherson, 2009; Floyd, Colvin, & Bodur, 2009; Meyer, et al., 2008). Librarians also see the need for integration of information literacy skills into the curriculum of the college (Scharf, Elliot, Huey, Briller, & Joshi, 2007). For instance, faculty and librarians in one study collaborated in a program that successfully used portfolios to assess writing and information literacy (Scharf, et al., 2007). Librarians also have called collaboration with English faculty "essential" (Warner, 2009, p. 163).

Because faculty-librarian collaborations have yielded positive results, some institutions have initiated formal information literacy programs that have encouraged faculty and librarians to work together to create a college-wide culture to increase students' information literacy. The success of this broader and more intentional collaboration prompted studies to investigate organized programs to develop information literacy (MacMillan, 2009; Meyer et al., 2008; Rockman, 2004; Warner, 2009; Zachery, 2010). These researchers have called for comprehensive information literacy programs through which librarians and faculty across disciplines assess and improve students' information literacy (MacMillan, 2009; Meyer et al.,

2008; Warner, 2009). Additionally, researchers note the important role that administrators play in the implementation of information literacy programs (ACRL, 2012; Breivik & Gee, 2006; McAdoo, 2009; Meyer et al., 2008; Nazari & Webber, 2011). One descriptive case study, in particular, noted the challenges a university faced when establishing an institution-wide information literacy program (McAdoo, 2008). Analysis of survey data from faculty demonstrated that the university lacked a shared definition for information literacy and further noted the need to study administrators' roles when implementing information literacy policies (McAdoo, 2008).

Although specific programs focused on information literacy are described in the literature, less attention is given to programs focused on an institution-wide commitment and implementation (MacMillan, 2009; McAdoo, 2008; Meyer et al., 2008; Warner, 2009). When researchers have studied institution-wide programs, they have emphasized the assessment of student learning and not the processes and experiences of stakeholders involved in those programs (McAdoo, 2008; Rockman, 2004; Zachery, 2004). A study of one particular institution-wide program in which all stakeholders developed a shared definition of information literacy would help in understanding how that process might work.

The University of Central Florida developed a shared vision for information fluency that involved faculty, librarians, and administrators resulting in a university-wide program to increase students' competencies. A case study of one institution that deliberately planned and implemented an institutionalized information literacy program would provide thick description of the participants' experiences and may help other educators understand the process used to implement an institutional information literacy program that encourages faculty and librarians to participate in joint efforts to enhance student learning. The University of Central Florida

recognized the relationships among technology, information literacy, and critical thinking in its design of the Quality Enhancement Plan that designated Information Fluency as the targeted area for improvement in 2005 (University of Central Florida [UCF] 2006). Because the program was in response to requirements for reaccreditation by the Southern Association for Colleges and Schools (SACS), it became institutionalized to meet compliance standards. Therefore, its characteristics as institution-wide and supported for at least five years warranted investigation. The purpose of this study was to describe and investigate how UCF planned, implemented, and supported their Information Fluency Initiative.

Purpose of the Study and Research Question

The purpose of the current study was to explore an institutional information literacy program to learn how that program was planned, implemented, and supported. This study also explored the relationships among faculty, librarians, and administrators involved in a formal, institutionalized information literacy program.

The study investigated the following question: How did a state supported university plan and implement an institution-wide information literacy program? Ancillary questions may provide the researcher with conceptual organizers or “bridges” to understanding complex phenomena (Stake, 1995). Ancillary questions that provided this study with those bridges included the following:

- How collaborative was the relationship between faculty and librarians?
- How did implementation and planning of the Information Fluency Initiative relate to the concept of the learning organization?

These questions guided this qualitative research case study.

Rationale for and Significance of the Study

Many faculty today are concerned with the amount of plagiarism in student papers (Belter & du Pré, 2009; Borg, 2009; Howard, 2007). The extent to which plagiarism is reported suggests that remedies need to be found. Punishments for plagiarism and the use of online plagiarism detection programs can mediate some plagiarism problems (Chao, Wilhelm, & Neureuther, 2009; Williams, Nathanson, & Paulhus, 2010). Assessments of students' abilities, however, have demonstrated that many students lacked the fundamental skills needed to use and evaluate source material in the current information and knowledge society (Auer & Krupar, 2001; Figa, Bone, & Macpherson, 2009; Lupton, 2008; Neely, 2002). Individual librarian-faculty collaborative projects have successfully improved students' information literacy (Bean & Thomas, 2010; Floyd, et al., 2008; Jackson, 2007). The success of these projects has led to a call for more formalized programs at the institutional level (MacMillan, 2009; Meyer et al., 2008; Warner, 2009). A study of one institutionalized information literacy program would add to educators' understanding of how one university planned and implemented that program. Such understanding would inform others as they grapple with the challenges of meeting student needs regarding information literacy. Additionally, a rich descriptive case study of one institution's information literacy program would provide other higher-education institutions with insight into developing collaborative relationships between faculty and librarians to improve students' information literacy.

Definitions

For purposes of this study, the following terms are used. These terms provide a common understanding of the concepts being examined.

Academic writing: writing that requires students to identify valid sources for academic purposes and accurately use information found in those sources

Disciplines: “a body of theory and technique that must be studied and mastered to be put into practice” (Senge, 1990, p.10)

Information Fluency: “the ability to think critically in an information-rich and technology-intensive environment. Information fluent individuals know how information is organized, know how to find information, evaluate information, and use information in a way that is useful to others’ learning.” (Information Fluency Office, 2012, p. 28).

Information Literacy: “an intellectual framework for understanding, finding, evaluating, and using information” (Association of College and Research Libraries, & American Library Association [ACRL], 2000, p. 3)

Information Literacy Program: an organized effort by a university to implement institution-wide instruction to improve students’ information literacy (American Library Association, [ALA], 2006)

Information Literacy Skills: skills that enable “an individual to use computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals” (ACRL, 2000, p. 3)

Learning Organization: an organization through which “people continually expand their capacity to create the results they truly desire, where new and expansive patterns of

thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (Senge, 1990, p. 3)

Plagiarism: the intentional copying of material – a form of cheating or not crediting source material

Professional Learning Community: a group of people who “constructs a shared vision of the changes and improvements on which they [members of the community] will work for the increased learning of students” (Hord, 2008, p. 12)

Shared Vision: a shared understanding of key organization concepts; a process that “involves the skills of unearthing shared ‘pictures of the future’ that foster genuine commitment and enrollment rather than compliance” (Senge, 1990, p. 9)

Unintentional plagiarism: incorrect use of source material caused by a misunderstanding of either the rules of notation or from a misunderstanding of the source material

Summary

Universities today increasingly recognize that, although millennial students live in an information-rich environment, they do not always have the critical skills needed to find, evaluate, and use that information. These skills, identified as information literacy by the Association of College and Research Libraries, are recognized as essential for thoughtful, academic writing. Studies have demonstrated that students’ information literacy abilities improved through instruction developed through collaboration among faculty, librarians, and administrators (Burkhardt, 2007; McAdoo, 2008). This chapter described the context justifying a qualitative case study of one institution-wide program developed to improve students’ information literacy, the rationale for pursuing such research, and the significance of the study. Chapter Two provides a review of relevant literature and describes the conceptual framework for the study.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This review of the literature examines the following nine topics related to research regarding the problems perceived with student use of source material in writing and the actions taken by faculty, librarians, and institutions of higher education to achieve the expected level of competence for students' academic writing. The first topic describes research studies that demonstrated a concern with plagiarism at the college level. Within the discussion of plagiarism, the review of literature examines methods that colleges and universities currently use either to punish students for plagiarism or to encourage academic honesty. The review also describes various instructional methods in the classroom for teaching proper source use. The second section examines the perceptions of students towards information, along with possible changing views of information use in an increasingly complex information environment.

The third section is an exploration of information literacy in practice. Because a common understanding of the term information literacy is needed to contextualize the roles of faculty and librarians when developing students' information literacy abilities, it includes the definition and history of information literacy. This section also provides a review of constructivist learning theory as it relates to teaching information literacy and a review of the methods used to teach information literacy. The development of specific information literacy policy by the Association of College Research Librarians (ACRL) is also examined in this section.

The fourth section describes the efforts of faculty and librarians to improve students' information literacy abilities in localized collaborative research projects (Bean & Thomas, 2010; Floyd et al., 2008; Jackson, 2007). As the fifth section, institutional information literacy

programs designed to replicate the localized projects are examined. Because a central concern of the current study is how a university developed a shared vision of information literacy, the sixth section reviews literature that reports how universities have acted as learning organizations to develop shared definitions of information literacy when reacting to changes engendered by the changing information environment.

Because qualitative research is recursive in nature, the process of carrying out this case study led to three additional areas of the literature that informed data analysis. First, as transcripts were reviewed, a sixth area of interest became apparent, namely the participants' sense of community. The seventh area of study, the professional learning community, helped explain the collaborative nature of the initiative and its impact upon participants. The eighth, collaboration in organizations, explained the impact of those collaborations on the university community. A ninth section on the scholarship of teaching and learning became necessary to fully explain the methods used in the initiative to encourage faculty in teaching research¹ and scholarship.

Finally, the conceptual framework that guided the study is described. The framework draws upon learning organization theory and constructivist learning theory to explain how an institution has initiated and developed one information literacy program.

Plagiarism

Plagiarism is not a new problem. The studies of Donald McCabe have for many years confirmed that concern over cheating and plagiarism on college campuses is not misplaced (McCabe & Trevino, 1993; McCabe & Trevino, 1997; McCabe, Butterfield & Trevino, 2006; McCabe, Trevino, & Butterfield, 2002). In fact, results of McCabe's 1990 survey led to the

¹ Teaching research in this context refers to the practice of teaching students the general process of gathering information prior to or during writing.

creation of the Center for Academic Integrity (CAI) at Rutgers University (International Center for Academic Integrity, 2010). In 2007, the Center moved to Clemson where it currently is a part of that school's Institute of Ethics (International Center for Academic Integrity, 2010). Renamed the International Center for Academic Integrity in 2010, the center had a membership of almost three hundred institutions as of January, 2011 (International Center for Academic Integrity, 2010).

McCabe's research documents a concern with cheating across disciplines, institutions and decades (McCabe & Trevino, 1993; McCabe & Trevino, 1997; McCabe, Butterfield & Trevino, 2006). From a 1990 survey of 31 institutes, researchers determined that academics should be concerned about a culture of cheating (McCabe & Trevino, 1993). McCabe and Trevino (1997) found that 82% of engineering students self-reported cheating while 91% of business majors reported cheating. Additionally, McCabe, Butterfield, and Trevino (2006) reported that 47% of non-business graduate students and 56% of graduate business students self-reported some form of cheating.

More recent studies continue to document the existence of student cheating. Rettinger and Kramer (2009) reported that 73.4% of 154 undergraduate students enrolled in a private university self-reported participating in some type of cheating. Of those students, 37.7% reported serious cheating which was defined by the researchers as plagiarism or cheating during an exam. Additionally, a review of disciplinary actions taken at seven Australian universities concluded that 90% of those actions concerned academic dishonesty, and, of that number, plagiarism compiled 72.04% (Lindsay, 2010).

Current literature not only supports the assumption that faculty consider cheating in the classroom a serious problem, but research studies also document that faculty are concerned with

a rise in plagiarism (Borg, 2009; Belter & du Pré, 2009). Other researchers suggest that plagiarism, if not on the increase, is more noticeable in our technological age (Boehm, Justice, & Weeks, 2009; Compton & Pfau, 2008; Williams, et al., 2010). For instance, during the spring of 2003, 65% of students in one computer science course were reported for plagiarism through Turnitin.com, an electronic plagiarism detection program (Jackson, 2006). In another study, 38% of these students self-reported plagiarism of some type (McCabe, 2005). In this same study, however, 79% of faculty reported discovering plagiarism of some type during a three-year span. Faculty also increasingly reported that too many students copy-and-paste portions of Internet text into papers (Auer & Kruper, 2001; Chao, et al., 2009; Lindsay, 2010).

Plagiarism by students should be a cause for concern in the academic community because researchers have suggested that many students who plagiarize do not understand the material they have read nor do they understand how to use and evaluate source material for academic writing (Albitz, 2007; Howard & Davies, 2009; Neely, 2002; Roig, 1999). Some writing teachers, in fact, focus on the ramifications of plagiarism for students' writing abilities (Adler-Kassner, Anson, & Howard, 2011; Howard & Davies, 2009). "Good" academic writing demonstrates that students can critically evaluate sources and use those sources to communicate their own understandings (Adler-Kassner et al., 2011; Emerson, 2011). Integrating sources, a complex process, requires students to have a variety of skills and abilities. Students who plagiarize by copying-and-pasting from the Internet are not learning these complex writing skills nor are they demonstrating the ethics expected by the academic community (Breivik & Gee, 2006; Emerson, 2008; Boehm, et al., 2009).

Ethics practiced in college are not unrelated to life after college. Two studies have signaled that institutional reputations may be affected when students exit the institution without

gaining the necessary skills (Boem, Justice, & Weeks, 2009; Happell & Jennings, 2008). That is, if graduates from a school do not have the abilities suggested by their grades, employers may assume that all students from that particular school will have deficient skills (Boem et al., 2009). A higher education institution's credibility is connected to the abilities of the students who exit the school (Happell & Jennings, 2008). Although institutions of higher learning do not manufacture products to sell, they rely in part upon the quality of graduates to reflect the quality of the institution. Additionally, the copy-and-paste habits of students may have serious consequences in their working lives (McGill, 2008). Future employers expect employees to locate, evaluate, and ethically use information in order to develop their own knowledge (Boem, et al., 2009; Breivik & Gee, 2006; Happell & Jennings, 2008; Meyer et al., 2008; Nazari & Webber, 2011). One particular example illustrates the need for ethics in the business world. The investigation surrounding the Gulf Oil spill uncovered serious misrepresentations in BP's paperwork. Bourne (2010) reported that plans for BP's Macondo Well included references that had obviously been copied from plans prepared for Arctic drilling, leading to suspicions that real vetting of possible problems of wells in the Gulf of Mexico had not been conducted. The implications from situations such as the Gulf oil spill should be clear. The need for ethical behavior is not limited to academics. Instead, both physical and financial safety of individuals might depend upon the ethical behavior of all parties. Because the implications of unethical behavior can be far reaching, institutions that do not take the issue of academic honesty seriously risk losing the confidence of the public (Boehm, et al., 2009; Breivik & Gee, 2006; Happell & Jennings, 2008).

In summary, some faculty assert that many students plagiarize not because they intend to cheat but because they have a fundamental misunderstanding of the term plagiarism and of the

skills needed to use and evaluate sources correctly (Howard, 2007; Neely, 2002; Schmelkin et al., 2008). In fact, plagiarism may be a result of a basic misunderstanding of the principles of academic writing (Belter & du Pré, 2009). One qualitative study asked students in focus groups and within individual interviews to define and discuss plagiarism (Power, 2009). Although the majority of the students stated that plagiarism was inappropriate, they had no clear understanding of the exact meaning of the term plagiarism and "had not adopted the concept of plagiarism as part of their own moral toolkits" (Power, 2009, p. 659). Students in an ethnographic study, in fact, did not identify plagiarism with morality (Blum, 2009). These students noted that their adherence to citation rules was situational; they only cited sources if they knew they might be accused of plagiarism. Many of the students in both studies had misconceptions about the definition of plagiarism and the seriousness of incorrect source use, often seeing such activities as mere academic exercises with no real benefit to themselves other than a necessary grade (Blum, 2009; Power, 2009).

Deterrence

Many colleges seeking to deter students from cheating have developed academic honesty policies (McCabe & Trevino, 1993; Melgoza & Smith, 2008). These policies generally define types of cheating and outline specific punishments (McCabe et al., 2002). The development of these statements, however, has little effect on student behavior unless time is invested in making those policies understood (McCabe & Trevino, 1993). One suggested method for communicating a college's intellectual standards is the establishment of college honor codes. Significant changes in student conduct have occurred in institutions that have implemented these policies (McCabe & Trevino, 1997; Melgoza & Smith, 2008). These honor codes prove most successful, however, when students are involved in the process (McCabe et al., 2002).

Proponents for the use of electronic detection programs such as Turnitin see these programs as the antidote to the copy-and-paste habits of students and suggest that for most students, knowledge that these programs will be used serves as strong deterrents to plagiarism (Chao, et al., 2009; Williams, Nathanson, & Paulhus, 2010). Other instructors use these programs as teaching instruments, allowing students to upload rough drafts and change writing that has used source material without correct documentation (Emerson, 2011). Electronic detection programs may prove useful when attempting to mitigate plagiarism, but they do not solve the problem if, in fact, students do not recognize that copy-and-paste activities are unethical.

Many researchers call for less emphasis upon punitive measures against students who plagiarize and more emphasis upon the importance of academic writing and teaching students the necessary skills to avoid plagiarism (Belter & du Pré, 2009; Chao et al., 2009; Emerson, 2008; Howard, 2007; Jackson, 2006). If many students plagiarize inadvertently, clearer communications of professors' expectations in writing assignments and clearer definitions for the skills needed in accessing and using information could prevent that inadvertent plagiarism (Emerson, 2008; Howard, 2007; Jackson, 2006).

Instruction

In fact, results from studies do indicate that paraphrasing and summarizing instructions successfully improve students' abilities to use source material correctly (Belter & du Pré, 2009; Emerson, 2008; Howard, 2000; Jackson, 2006). For instance, in one quantitative study of student quiz results, some students did not have the basic skills needed to use source material (Jackson, 2006). In another study, when researchers combined paraphrasing training with the use of the plagiarism detection program, Turnitin, the experimental group's occurrences of

plagiarism proved to be significantly less than the control group ($p < .01$) (Belter & du Pré, 2009). Combining student interest in technology with instruction in paraphrasing and documentation, then, successfully reduced incidents of plagiarism.

In addition to using plagiarism detection programs to deter plagiarism, some faculty specifically teach documentation and paraphrasing skills (Chao et al., 2009; Howard, 2007; Jackson, 2007; Walker, 2008). In a study of 36 students enrolled in two separate sections of Psychology I, researchers determined that students' abilities to paraphrase correctly increased with the benefit of paraphrasing training (Walker, 2008). Students who had training in paraphrasing sources “produced significantly less word strings, substitutions, additions, deletions, and reversals than the control” ($r = .57, p = .01$) (Walker, 2008, p. 391). In other words, when students were given training in paraphrasing skills, they were less likely to use source material inaccurately.

Some faculty continue to identify all misuse of sources as plagiarism, but other faculty make clear distinctions between deliberate cheating and unintentional plagiarism. From the perspective of the English teacher, Howard (1995) suggested the term *patchwriting* to identify the skills needed to help college students transition into the college writing environment (p. 788). She argued that much of the student work that is designated as plagiarism is not intentional cheating but instead a demonstrated lack of expertise in using resource material. Therefore, instances such as “insufficient citation; failure to mark quotations; failure to acknowledge sources; and taking brief strings of discourse from a source and patching them” should not be labeled in the same category as students' cheating by submitting work not their own (Howard, 2000, pp. 487-488).

When college students were identified as having insufficient paraphrasing and citation skills, Emerson (2008) initiated a classroom study using Turnitin along with teacher student conferences. Although she was unable to quantify any specific reduction in plagiarism, she was able to identify certain writing habits that led to plagiarism. In particular, those students who plagiarized had fewer conferences with the instructor. Emerson then concluded that plagiarism may often be the result of inadequate understanding of source use rather than a purposeful act of cheating.

Teaching research skills is often thought to be the responsibility of English teachers, but instructors of other disciplines have increasingly expressed concern over plagiarism in college papers and have looked for ways to improve students' academic writing abilities (Compton & Pfau, 2010; Xiao & Traboulay, 2007). Compton and Pfau (2010) concentrated on the act of plagiarism as it relates to academic integrity across disciplines in colleges. From the results of this study of 225 students, the authors noted that students benefited from discussions that defined and discussed the ramifications of plagiarism. These authors suggested that students should be given clear definitions of plagiarism early in their college careers. Concerned with plagiarism at the graduate level, Xiao and Traboulay (2007) integrated information literacy online components into a master's thesis seminar. The resulting qualitative data from work with 20 students supported the effectiveness of information literacy instruction to reduce plagiarism.

Student Culture

Plagiarism is not simple to define. An exploration of the history and varied definitions of plagiarism revealed that definitions of plagiarism have changed from the Greeks, who urged students to copy the speeches of great orators, and Shakespeare, who freely "borrowed" from many sources (Posner, 2007). Our modern definition stems as much from a concern with

copyright and financial laws as it does from an interest in academic honesty, and this definition may be changing with the use of the Internet (Posner, 2007). Because the environment of the Internet gives students more opportunities to copy and paste or buy papers, some researchers suggest that not only is plagiarism increasing, but that a culture that accepts cheating exists (Owunwanne et al., 2010; Rettinger, 2008; Williams et al. 2010). Students used to reading information almost exclusively from the Internet where few sources are cited might understandably be confused about the need for or the correct way to cite sources. However, this confusion does not exempt students from understanding and learning how to use the ideas and words of others appropriately.

Word-processing programs and the Internet have combined to change the way students interact with information. Not only has plagiarism, specifically the copying and pasting of information, become easier, but the prevalence of these activities has also led to an "attitude of societal acceptance" (Brown et al., 2008, p. 141). In the culture of the Internet where many young students communicate, sharing of material is easy, and social networking sites encourage people to "share" information by copying links and photos. When students are asked to share information academically, they use those skills they have developed for sharing on the Internet (Blum, 2009; Breivik, 2005).

Students also cheat more when they perceive that others are cheating (McCabe & Trevino, 1997; Boehm, Justice, & Weeks, 2009). The varied ways that students may now interact electronically encourages sharing of information. The average millennial employs "fragments of text-images, lines, plots-collected from an astonishing array of available sources" (Blum, 2009, p. 89). The nature of 21st Century information interaction leads to an acceptance of

such activities as sharing answers for homework assignments or exam questions (Anitsal, Anitsal, & Elmore (2009).

Two qualitative studies in particular have demonstrated changes in the way that students approach college life (Blum, 2009; Nathan, 2005). First, the 21st Century student often perceives outside activities as important as, if not more important than, academic life (Nathan, 2005). Interviews and surveys from Nathan's study demonstrated that students also spend more time working to pay for college than previous generations and that their attitudes towards grades is pragmatic and goal-oriented. Blum's (2009) ethnographic study of 234 college students also revealed that many students viewed the use of sources from a pragmatic perspective. In interviews, students discussed the pressures to succeed and connected success to the amount of money they would make with a college degree. These students were much less likely than previous generations to note self-fulfillment or knowledge growth as their primary college goals (Blum, 2009). In this culture, the entire definition of plagiarism seemed to be shifting along with students' perceptions of themselves (Blum, 2009). In their highly social, web-connected experience, students perceived the sharing of language and information differently from those of us who experienced the print environment. These students saw themselves as "performance selves" who write to meet specific goals (Blum, 2009, p. 61) vs. the "authentic" print learners who search for independent meanings (p. 61). In other words, while the authentic learners want their work to be unique, the performance selves want to determine how that work helps them meet their goals.

Helping students understand the complexities of source use and research writing in a new, technological culture is not simple (Blum, 2007; Power, 2009). For instance, Blum (2009) noted that student use of Wikis to collaborate on the web and a discussion of student willingness to

share their own information on non-copyrighted sites such as YouTube illustrated students' changing attitudes towards information. Although the availability of information and students' attitudes may have changed, educators have a responsibility to ensure that college students do have the necessary skills to use information correctly (Blum, 2009; Posner, 2007). The changing attitudes of students towards information, however, make that responsibility challenging.

Almost any definition of plagiarism will contain the words "common knowledge" and assert that use of common knowledge does not require citations (Borg, 2009). However, the reader and writer, that is, the faculty member and student, must agree on the definition of common knowledge (Blum, 2009; Borg, 2009; Posner, 2007). The changing learning and experiential environments of students interacting with sources on the Internet, however, lead to sometimes vastly different interpretations of that term. Because the performing selves are goal-oriented and collaborative, they may perceive the sharing of information from various web sites as practical and normal and not cheating (Blum, 2009). They might also perceive much of the information on the Internet as common knowledge if they find this knowledge repeated in many sites.

Culture also plays a part in student perceptions of common knowledge and the need for documentation (Breivik & Gee, 2006; Thompson & Pennycook, 2008; Shi, 2011; Sutherland-Smith, 2008). As illustrated in Sutherland-Smith's 2008 study, many international students attending one university in Australia had different experiences in secondary schools where the memorizing of facts and scripted answers is important in passing exams. The students in this study also related their fear of making mistakes when writing papers in their own words. Students copied words from a text in order to be correct without understanding the need for citations or overused citations from fear of inadvertently plagiarizing.

In summary, the performing student and the international student would seem to lack a clear understanding regarding the use of sources in academic writing, especially sources from the Internet. Their misunderstanding often leads to accusations of plagiarism (Howard & Davies, 2009). Some faculty use deterrents such as honor courts or anti-plagiarism programs to punish students. Other faculty call for more instruction in the skills of source use to improve students' academic writing. Students' fundamental misunderstanding of core concepts such as common knowledge, however, suggests many students lack the abilities to use sources reliably. The term information literacy, established by the Association of College Research Libraries ([ACRL], 2000), requires students to access, use, and evaluate source material. The ACRL also frames the need for information literacy as an ethical issue. Framing the issue of plagiarism in the context of information literacy may offer potential for helping students learn how to use information appropriately.

Information Literacy

College students may not always know how to access, evaluate, and use information for academic papers (Allen, 2007; Breivik, 2005; Egan & Katz, 2007; Floyd et al., 2008; Chen & Williams, 2008). For instance, only 40% of students in one school's college of education correctly identified quality information on the Web (Wang, 2007, p. 596). College of Education majors in another study were unsure of the quality of articles needed in research (Floyd et al., 2008). Many first-year college students in this same study, although comfortable with Google searches, were not confident of their skills when searching the colleges' databases (Meyer et al., 2008). Results from studies also demonstrated that students are not competent researchers. Thirty-two out of 122 students in one study could not demonstrate basic abilities to find college-level information (Figa et al., 2009, p. 92). Additionally, researchers who investigated the

online abilities of 162 students recommended that all online students be required to take a course in technology and information literacy (Chen & Williams, 2009). Results from these studies suggested that students are not as information-literate as they or faculty believe.

Definition

The term information literacy originated in 1974 when Paul Zurkowski described the new skills that would be needed to access and assess information in a technology-rich environment (McAdoo, 2008; Pinto, Córdón, & Díaz, 2010). Faced with the development of online access to source materials, librarians had to incorporate teaching technological access skills to students along with the traditional skills used in the print environment (Breivik, 2005; Mazella & Grob, 2011). The ACRL, in fact, defined information technology as a skill that “enables an individual to use computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals”(2000, p. 3). The ACRL, however, made a distinction between the use of technology and a broader definition of information literacy that included using and evaluating information (Burkhardt, 2007; Figa et al., 2009; McAdoo, 2008; McClure & Clink, 2009). The policy statement by the ACRL clearly defined the term information literacy and listed standards and performance indicators that should be considered when assessing information. The brief defined information literacy as “an intellectual framework for understanding, finding, evaluating, and using information” (Pinto et al., 2010, p. 3). In this increasingly technological age, however, understanding of information literacy must include not only finding sources through various online avenues such as databases, web sites, and search engines but must also include the ability to discern the value of each of these sources and the ability to use the information effectively (Breivik & Gee, 2006). In fact, in her study of 150 graduate and undergraduate students, Bulgar (2008) concluded that "gauging credibility and

synthesizing materials to form and communicate an understanding" are as important in the development of students' use of information as accessing information (p. xii). With the development of the ACRL's information literacy policy, librarians began to focus less on the identification of the technology to access information and instead focused on students' abilities to evaluate that information (Allen, 2007; Hignite et al., 2009; Pinto et al., 2010).

Constructivist Learning Theory and Information Literacy

Constructivist learning theorists suggest that students add to existing knowledge through making meaning of their experiences (Bruner, 1996; Novak, 2010). Some college faculty expect students to have greater fundamental knowledge of information literacy than those students possess (Moore & Ivory, 2000; Neely, 2002). Because many students constantly use technology, many faculty believe that those students have the necessary technological skills to find valid academic sources in today's information-rich culture (Allen, 2007). Faculty may also assume that students, because they are so tied into technology, are also able to recognize and use the academic sources (Allen, 2007; Neely, 2002). There is evidence that, even though students are submerged in the Internet culture, they often do not possess the technological and critical thinking skills needed to conduct effective research and write successful academic papers (Breivik, 2005; Howard & Davies, 2009; Kim & Sin, 2007; Neely, 2002; Nichols, 2009). In fact, in one investigation of student research behavior, many students reported frustrations when attempting to access information from databases that led them to choose sources for easy accessibility rather than accuracy (Kim & Sin, 2007).

Students also often overestimate their own understanding of information literacy (Karas & Green, 2007; Macklin, 2008; McClure & Clink, 2009; Neely, 2002; Wang, 2007). If students do not recognize their own weaknesses as researchers and writers, they do not recognize the need

to improve their abilities. Human cognitive theorists would suggest that students must recognize their need for new knowledge to be involved in meaningful learning (Bruner, 1996; Nichols, 2009; Novak, 2010). Learning is meaningful when "information is related to an existing relevant aspect of an individual's knowledge structure" (Novak, p. 59). A first step, then, to increasing students' college academic writing abilities is to convince them of the compelling value in improving their abilities to find, use, and evaluate information ethically.

Teaching Information Literacy

Students' lack of experience with access to, use of, and evaluation of sources has been an increasing topic of discussion at the college level (Floyd et al., 2008; Gurney & Wilkes, 2008; Neely, 2002). With the increase in online sources available for research, librarians began to recognize that students needed more specific instruction in digital research (Breivik, 2005; Eisenberg & Berkowitz, 1990). Early approaches used by librarians for teaching information literacy emphasized the skills needed to use technology; thus, the "one-shot" library introduction has been a staple of many courses (Bean & Thomas, 2010). The one-shot session is usually an hour-to-two-hour presentation by librarians that demonstrates the use of a library's databases (Bean & Thomas, 2010; McAdoo, 2008). Increasingly, however, that one-shot library introduction has proven inadequate as a preparation for student researchers because the students not only lack the skills to find sources, but also often lack the ability to assess the quality of sources (Bean & Thomas, 2010; McAdoo, 2008).

In most institutions, librarians have been responsible for teaching information literacy skills (Bean & Thomas, 2010; McAdoo, 2008). When the one-shot presentations failed to prepare students for the rigors of academic research, librarians introduced initiatives to teach and assess information literacy (Bean & Thomas, 2010; Burkhardt, 2007; Figa et al., 2009; Floyd et

al., 2008). Thus, other instructional approaches have combined the teaching of technological searching skills with an emphasis on the evaluative abilities of students (Breivik, 2005; Eisenberg & Berkowitz, 1990; Pinto et al., 2010; Nichols, 2009).

The Big Six Skills Approach, a research method primarily developed for elementary and high schools, gained the attention of first-year composition instructors at Western Carolina University (Warner, 2009). Western Carolina University reported success when selected instructors, in partnership with librarians, integrated content-area instruction with the use of the Big Six Skills Approach (Warner, 2009). Importantly, the Big Six research method initiated a systematic approach to teaching information literacy skills at that university (Warner, 2009).

The Big Six Skills Approach (Eisenberg & Berkowitz, 1990) emphasizes the need for students to have the skills necessary to access information from particular places in the library. However, this approach also emphasizes the knowledge that students need to transfer that ability to different situations. These skills involve:

- The ability to define the research problem,
- The ability to identify appropriate strategies to use in approaching the research problem,
- The ability to access those sources,
- The ability to use the information for specific purposes,
- The ability to synthesize sources, and
- The ability to evaluate sources. (Eisenberg & Berkowitz, 1990)

Using these six skills in research assignments, students concentrate on locating the best sources for their research needs in an increasingly complex information world.

Librarians increasingly use assessments to determine the effectiveness of information literacy instruction (Burkhardt, 2007; Mackey & Jacobson, 2004; Oakleaf, 2009). Oakleaf (2009) asserted that because assessment of information literacy by higher-education faculty is still infrequent, librarians should use assessments as teaching tools to determine students' abilities and changing needs. Librarians have, in fact, increasingly used assessments to determine the advantages of long-term information literacy programs (Burkhardt, 2007; Mackey & Jacobson, 2004; Oakleaf, 2009). The iSkills assessment was a method to report research habits originally designed for journalism students to track and reflect upon their development of information literacy skills (Egan & Katz, 2007; MacMillan, 2009). Using iSkills, journalism students tracked their information literacy abilities during a three-year program by systematically updating their résumés with sample researched articles and sending those to a librarian (MacMillan, 2009). The students showed improvement in their abilities to find and use sources effectively. This study's results indicated that long-term information literacy instruction is more effective than short-term information literacy sessions (MacMillan, 2009).

Burkhardt (2007) examined the results of pre-and post-tests designed to study student comfort levels with and their abilities to use information literacy skills before and after taking "Introduction to Information Literacy," a course given to students attending the University of Rhode Island. Students' abilities and comfort levels improved significantly ($p < .05$) after taking the course. Pre-and posttests assessed concrete abilities of student researchers and also determined the effects of instruction in these areas. In particular, Burkhardt's (2007) study showed that instruction in information literacy skills would increase students' abilities to find and use information.

Many students also lack abilities to evaluate and use sources critically (Breivik, 2005; Burkhardt, 2007; Neely, 2002; Nichols, 2009). Correlational studies have indicated that students' performances on information-literacy tasks increased as they were exposed to information literacy instruction (Burkhardt, 2007; Neely, 2002). Neely (2002) presented empirical data to support the need for information literacy instruction. Neely's study used a survey instrument adapted from the *Morner Test of Library Research Skills*. This instrument measured students' abilities to find appropriate sources and evaluate those sources. A combination of 144 undergraduate, masters, and doctoral students completed the survey. Correlations and T-tests were performed, along with statistical analysis and regression analysis. Direct correlations were found between students' performances on information literacy tasks and their exposure to information literacy instruction, with no statistical difference between levels of students (Neely, 2002).

Neely's 2002 study and Burkhardt's 2007 study demonstrated that college students need and benefit from instruction in locating, evaluating and using information. Both studies reinforced the need for information literacy instruction. Neely's study demonstrated that formal training can improve students' abilities to access and evaluate information. Burkhardt's study of the relationship between test scores and classroom experiences also demonstrated that formal informational literacy instruction has an impact on both students' research skills and comfort levels in carrying out research tasks.

Some approaches to teaching information literacy incorporate technology and assessment (Burkhardt, 2007; Egan & Katz 2007; Macklin, 2008). For instance, Macklin (2008) described a mixed methods study of a problem-based approach to information literacy instruction. In this study, students were asked to seek answers to real-world problems (Macklin, 2008). Students'

improvement of information literacy skills was quantitatively measured through pre- and post-tests of information and communication technology (ICT). Researchers also interviewed participants. Although there was no significant gain in the students' knowledge of information literacy on the pre- and post-tests ($p = .80$), the qualitative findings demonstrated that students improved in their abilities to explain their thinking (Macklin, 2008). From her results, Macklin suggested that one hour of library instruction was no longer enough to prepare students for academic research. Macklin further suggested that faculty and librarians needed to collaborate in designing comprehensive methods to increase students' knowledge of information literacy.

Research studies have demonstrated that students lack necessary information literacy abilities (Burkhardt, 2007; Neely, 2002; Nichols, 2009; Macklin, 2008). Additionally, Neely (2002) sought to assess students' perceptions of their abilities. An important finding from neely's study was the inaccuracy of students' perceptions of their own abilities. Students in this study self-reported an understanding of information literacy that quantitative testing did not support. Other studies also support students' inflated view of their search skills (Macklin, 2008; McClure & Clink, 2009).

In summary, Eisenberg and Berkowitz (1990) suggested that the Internet had made research more difficult, not easier. Students today face a more complicated research environment than the one Eisenberg and Berkowitz examined in 1990. In addition, students' abilities to use technology have not always translated into the abilities to find, evaluate, and use academic source material successfully (Burkhardt, 2007; Neely, 2002). The one-shot library introduction of the past is inadequate to student needs, and other avenues have been explored (Bean & Thomas, 2010; Burkhardt, 2007; Eisenberg & Berkowitz, 1990; Figa et al., 2009; Floyd et al., 2008).

Further, assessments have demonstrated that improving students' information literacy abilities is challenging for both faculty and librarians (Macklin, 2008; MacMillan, 2009; Neely, 2002). The Association of College and Research Libraries (ACRL), in particular, has been concerned with students' need for information literacy skills and has been instrumental in developing specific policies and positions concerning both the definitions and expectations for those skills.

Information Literacy Policy

The Association of College and Research Libraries' (ACRL) policy entitled "Information Literacy Competency Standards for Higher Education" (2000) has been widely accepted as a guide for higher-education implementation of information literacy instruction (Saunders, 2008). The American Association for Higher Education and the Council of Independent Colleges have both endorsed the policy (ACRL, 2000). The policy has, in fact, been used in the last 10 years as the guide for many states' information literacy standards (Saunders, 2008). These standards have also been increasingly important guidelines for the implementation of information literacy assessments at many colleges (Saunders, 2008).

The ACRL (2000) stated that information literacy goes beyond familiarity with the technology to be defined as that which "initiates, sustains, and extends lifelong learning through abilities which may use technologies but are ultimately independent of them" (p. 3). In this 2000 policy, there are five standards listed to determine students' information literacy. The student:

- Recognizes the need for information gained from sources in academic writing,
- Accesses academic sources competently,
- Evaluates academic sources critically and uses the sources effectively,
- Recognizes the need to use sources for specific purposes, and

- Recognizes the need for ethical use of information.

In summary, when the ACRL's 2000 report first appeared, faculty and librarians might have debated the need for competence in the use and evaluation of online sources. The ACRL, however, predicted and articulated today's almost complete reliance on data from online sources. Today's students need the ability not only to locate information online, but also to assess and critically evaluate that information. The ACRL's policy gave specific recommendations for librarians and faculty to improve those abilities.

Faculty and Librarian Collaboration in Information Literacy Instruction

A growing body of researchers has called for more information literacy instruction at the college level (Pinto et al., 2010). Faculty have recognized that the ability to use sources appropriately directly affects students' abilities to write (Howard, 2000; Lupton, 2008; Shonrock & Crull, 2009). One study, for instance, demonstrated the relationship between the writing task and information literacy (Lupton, 2008). Students in another study improved their use of critical thinking when working on projects jointly planned by a faculty member and a librarian (Shonrock & Crull, 2009). Librarians have also recognized the importance of information literacy in the college curriculum (Rollins et al., 2009). In fact, a review of information literacy literature demonstrated that individual faculty members and librarians have often collaborated to increase students' understanding of information literacy (Pinto et al., 2010).

One on-going study highlights the interest in collaboration between librarians and faculty to understand and enhance students' information literacy. Project Information Literacy, or PIL, is a project headed by Alison Head and Michael Eisenberg (Information School, 2011). The project works to create a clearer picture of how students research in the digital age. Head is a research scientist at the University of Washington Information School, and Eisenberg is Dean

Emeritus and Professor from the Information School at the University of Washington and one of the developers of the Big Six Skills Approach (Information School, 2011). This national research project, based upon an exploratory study completed by Head in 2007, is a collaborative effort between librarians and instructors nation-wide. Project Information Literacy's aim is to "determine [what] the process of research means for college students in the digital age" (Information School, 2011). Results from one survey of 2,318 respondents, for instance, revealed that students did use scholarly resources from the library but seldom contacted librarians for assistance (Head & Eisenburg, 2010).

Data from studies have shown that individual librarian and faculty collaboration projects led to improved student information literacy abilities (Bean & Thomas, 2010; Floyd et al., 2008; Jackson, 2007). In one study, instructors required freshmen to complete online tutorials and quizzes developed by librarians (Jackson, 2007). Results from this study demonstrated a 6% improvement in the ability of students to identify plagiarism. In another study, librarians and faculty collaborated at Marshall University to develop lesson plans focused on information literacy and directly linked to a class assignment (Bean & Thomas, 2010). In answering questionnaires about their experience with these lessons, 89% of the participants thought that the librarians were enthusiastic, and 75% said that they would be likely to return for help from the librarian who presented the information (p. 245). The results from this classroom study encouraged faculty and librarians to continue their collaborations to develop classroom activities to improve students' information abilities. In still another study, a librarian teamed with the instructor of a required field-experience course in an effort to improve students' choices of source material (Floyd et al. 2008). The librarians reviewed the lesson requirements and offered workshops geared towards the selection of scholarly sources. Although the study was limited in

size, participants demonstrated a higher use of scholarly literature after sessions with librarians ($p < .01$). The results of these studies, then, indicated that collaborative efforts between faculty and librarians may improve students' information literacy abilities.

Disagreement exists between librarians and faculty on some issues, however (Rollins et al., 2009). First, librarians emphasize the term information literacy, and faculty emphasize the term critical thinking (Albitz, 2007). The librarian's concern with information literacy often emphasizes skills that can be tested while the critical thinking component is more complex and difficult to assess (Albitz, 2007; Osman, 2008; Rollins et al., 2009). Rollins et al. (2009) suggested, however, that, although the terms are not interchangeable, they are clearly related and that the relationship between the two terms should be further explored.

The overlap between the Council of Writing Program Administrators' (WPA) Outcomes Statement for First-Year Composition courses and the standards set by the ACRL illustrates the relationship between information literacy and critical thinking (D'Angelo, 2009). The WPA's assertion that students should be able to think, read, and write critically corresponds to the ACRL's call for students to be able to critically evaluate their sources (D'Angelo, 2009). Additionally, the WPA's recognition that students must correctly document sources aligns with the ACRL's statement that students must learn to avoid plagiarism and must learn to document their sources correctly (D'Angelo, 2009).

Faculty and librarians may also have different perceptions of the librarian's role in teaching information literacy (Rollins et al., 2009). With the increasing emphasis by institutions on the importance of students' information literacy abilities, librarians are taking a more active role in the curriculum (Macdonald, 2008; McGuinness, 2006; Moore & Ivory, 2000;

Rollins et al., 2009). Macdonald (2008), in a reflection of her role as a librarian, noted, however, that faculty often lack awareness of the teaching capabilities of librarians. Additionally, although many faculty recognize the need for students to acquire information literacy skills, they often resist a greater role by librarians in the curriculum, citing that classroom time given to librarians for the teaching of those skills takes away from the teachers' instructional time (Rollins et al., 2009). In fact, the findings of one study examining faculty attitudes towards information literacy indicated that faculty believed that students developed information literacy abilities "intuitively, through participation in a number of different scenarios" (McGuinness, 2006, p. 580) and would not need formal instruction. Another study of faculty attitudes also found that faculty believed students came to college with the necessary information literacy abilities and did not need instruction (Moore & Ivory, 2000).

English teachers are increasingly overwhelmed with the amount of information and the number of information sources to which their students have access (Figa et al., 2009; McClure & Clink, 2009; Stevens, 2006). Studies have shown, however, that collaboration with librarians can relieve the English teachers of the need to teach skills and that collaboration can also improve student information literacy abilities (Figa et al., 2009; Stevens, 2006). Additionally, the problems with student academic writing reach across disciplines and call for an institution-wide effort by all faculty and librarians to develop solutions. If collaboration between librarians and faculty leads to more effective use of research by students, the question becomes how to achieve that collaboration, what that collaboration looks like, and what specific student activities prove most beneficial.

Information Literacy Programs

Some institutions have taken steps to formalize programs to develop students' information literacy abilities. These programs have often relied upon collaboration between librarians and faculty (MacMillan, 2009; Meyer et al., 2008; Warner, 2009). The program at Mount Royal College in Calgary Alberta, Canada (MacMillan, 2009), for instance, was begun as a five-year study of journalism students' progress in information literacy. The study involved collaboration between librarians and faculty; librarians provided instruction to align with classroom needs, and students tracked their improvements with the iSkills résumé. The study proved so successful that it was continued for an additional five years.

Similarly, Warner (2009) reported that her study concerning students' information abilities built upon strong collaboration between the faculty and librarians at Rider University. The addition of a library component to the freshman-writing program in 1994 underscored the importance of that collaboration. Warner's study led to the development of an online tutorial that increased the overall effectiveness of librarian instruction at the institution and led to more discussion among disciplines about the need for improvement in student information literacy skills.

Other programs embed online links to librarians in a course or courses as information literacy experts who are "on call" for students (Bean & Thomas, 2010; Figa et al., 2009; Floyd et al., 2008; Meyer et al., 2008). One online program used "embedded librarians" who were on hand to answer students' questions (Bean & Thomas, 2010). In another online environment, the embedded librarian held group instruction sessions along with giving one-to-one help (Figa et al., 2009). Librarian workshops have also been tailored to reflect the demands of classroom assignments (Floyd et al., 2008). In a quantitative study of 324 students, the experimental group,

which had three sessions with librarians and kept a research log, outperformed the control group at a significant level ($p < .05$) (Meyer et al., 2008). Evidence from these studies confirmed that organized institutional programs that support closer working relationships between librarians and faculty increase students' information literacy abilities (Bean & Thomas, 2010; Figa et al., 2009; Floyd et al., 2008; Meyer et al., 2008).

Another reason for institutionalizing information literacy programs comes from accreditation agencies (McAdoo, 2008; Saunders, 2008). Accreditation agencies are increasingly interested in the information literacy policies of institutions (Saunders, 2008). A review of the literature of library and information science (LIS) noted that all six regional accreditation agencies in the United States now recognize information literacy as an aspect to be considered in accreditation (Saunders, 2008). As a result of the accreditation process, some schools have begun to assess their schools' information literacy policies and programs (Saunders, 2008). For example, results from a qualitative case study of one information literacy program at Edinboro University of PA, a member of the Middle States Commission on Higher Education (MSA), indicated that the school's information policy did not meet MSA standards (McAdoo, 2008). In fact, a survey from this study determined that many faculty had no clear definition of information literacy and no agreement on how information literacy instruction should occur. The study's results indicated a need for further study of faculty perceptions of information literacy and further study of the role that administrators play in the implementation of information literacy policies (McAdoo, 2010).

Finally, studies have demonstrated that close cooperation between faculty and librarians strengthened schools' information literacy efforts (MacMillan, 2009; Meyer et al., 2008; Warner, 2009). Significantly, the researchers in these studies all called for more investigation into library

and faculty cooperation in information literacy programs. The studies also supported the efficacy of librarian-led information literacy instruction closely connected to the classroom.

Researchers have also reported obstacles to the implementation of information literacy instruction in colleges (Löfström & Nevgi, 2007; Miller, 2010; Moore & Ivory, 2000). Some faculty, for instance, lacked information literacy abilities themselves (Moore & Ivory, 2000). A study of faculty information literacy at one institution demonstrated that faculty, especially those not actively engaged in research, would benefit from training to update their research skills (Moore & Ivory, 2000).

Researchers have also examined the need for time to implement information literacy programs (Bean & Thomas, 2010; Löfström & Nevgi, 2007). One study that investigated faculty attitudes towards training to help them implement a web-based information and communication technology program found that lack of time was a major impediment to faculty participation (Löfström, 2007). Librarians involved in an institution-wide project to embed librarians in college courses to answer students' questions also reported that lack of time often impeded their ability to work more fully with faculty to implement information literacy curriculum (Bean & Thomas, 2010).

A final obstacle to information literacy instruction at colleges is one of money and staffing (Mazella & Grob, 2011; Miller, 2010). Researchers noted that one collaborative effort between a faculty member and librarian to integrate library instruction with specific curriculum was time-intensive (Mazella & Grob, 2011). In this study, the researchers reported that budget-cutting in institutions challenges librarians to find the time needed for intensive collaborations with faculty. These same budget concerns limited schools' abilities to provide stipends for

faculty who have been more inclined to participate in formalized information literacy programs when paid (Bean & Thomas, 2010; Miller, 2010).

In summary, some instructors have suggested that students need more training to improve their academic writing abilities (Howard, 2000; Lupton, 2008; Shonrock & Crull, 2009). Librarians, too, have written about students' lack of research abilities and have identified the problem as a lack of information literacy skills (Burkhardt, 2007; Neely, 2002). They, like faculty, continue to look for ways to improve student abilities. Possible solutions to the two problems may lie in the institutional adoption of clear policies concerning academic standards for student research and writing. Universities, as learning organizations, can foster collaboration between faculty and librarians to develop those policies, communicate those policies to students, and help students achieve the goals articulated within those policies.

The College Culture as a Learning Organization

The learning organization is one in which people work together in order to change the institution to fit their own visions (Senge, 1990). The learning organization's effectiveness in part depends upon that organization's ability to evolve and change as needed (Senge, et al., 2000). Schools, as learning organizations, rely upon the interactions of individuals and departments in that organization (Senge et al., 2000). That interaction allows the organization to develop procedures for change and to align individual objectives with the goals of the organization.

Learning organizations rely upon the five disciplines to facilitate change. Those disciplines, as defined by Senge (1990), are theories that "must be studied and mastered to be put into practice" (p. 10). Personal mastery, the first of Senge's disciplines, plays an essential part in an academic's life. College professionals rely upon personal mastery of their subject and of their

teaching skills. On the institutional level, however, personal mastery goes beyond the disciplines to include an individual commitment to a stated purpose (Senge et al., 2000). In an information literacy program, for instance, individual faculty members must accept the premise that students' information literacy can be improved through instruction. Secondly, the university as a learning organization must also manage the mental models of individuals and the institution. Managing mental models involves "surfacing, testing, and improving our internal pictures of how the world works" (Senge, 1990, p. 174). Awareness of an institution's mental models allows the university to recognize impediments to change. Faculty from diverse departments in one university, for instance, often differed in their understanding of information literacy (McAdoo, 2008).

Recognition of those differing mental models and reflection upon their importance allows the university to identify possible problems with and impediments to the implementation of an institutional information literacy program. The third discipline, shared vision, is "the set of tools and techniques for bringing all of these [people's] disparate aspirations into alignment around the things people have in common" (Senge et al., 2000). Without a shared vision for solving a problem, the university will lack commitment on the part of its faculty to effect change. When implementing an institution-wide information literacy policy, for example, all stakeholders must agree on the definition of information literacy and the role faculty and librarians must play when improving students' information literacy.

Once an organization develops a shared vision for a problem, an institution's stakeholders align their goals to move in a common direction through team learning. Team learning, the fourth discipline, "develops the skills of groups of people to look for the larger picture that lies beyond individual perspectives (Senge, 1990, p. 12). Dialogue among members of the college organization can lead to a shared vision for enacting change in the learning

organization (Senge, 1990; Finch, Burrell, Walker, Rahim, & Dawson, 2010; Flood, 1999). Along with dialogue is the need for cooperation, networking, and “action learning” to solve problems and to effect change (Day, 2001, p. 601). Within higher education, members of the institution can adopt these approaches by developing a common definition of information literacy and forming institutional policy collaboratively. Results from a focus group of faculty conducted by the Consortium for the Advancement of Adult Higher Education, for instance, indicated that development of a shared vision contributed to a university’s ability to adapt and innovate (Finch et al, 2010). Teachers who participated in learning communities in another study showed the value of participation by faculty and librarians who collaboratively constructed new curricula for information literacy (Elster, 2010).

Finally, the learning organization must reflect the fifth discipline, systems thinking. Senge (1990) describes systems thinking as “the discipline that integrates the disciplines, fusing them into a coherent body of theory and practice” (p. 12). Systems thinking recognizes that the elements of organizations are not isolated and that complex systems rely upon interrelationships (Senge, 1990). The university, when effecting change, must recognize the complexities inherent in its organization and acknowledge the need for all stakeholders to participate in that change. When applying systems thinking to the need for increased student information literacy, the university will recognize the importance of a cohesive approach involving all stakeholders.

The increasing complexity of the information society has changed the way students, faculty, and librarians interact with information (Breivik & Gee, 2006; McAdoo, 2008; McGuinness, 2006; Rollins et al., 2009). The organizational cultures of universities, however, do not always change easily or quickly (Finch et al., 2010). Further, the hierarchical structure of a university often inhibits quick reactions to change (Finch et al., 2010; Iannuzzi, 1998). In fact,

studies indicated that many universities and colleges have been slow to react to the changing information environment and have no clear information literacy policy (McAdoo, 2008; McGuinness, 2006; Rollins et al., 2009). The results of one qualitative study at a university demonstrated that faculty's disciplines determined their definition of information literacy and their expectations for the use of sources in student papers (McGuinness, 2006). Further, in a case study at one university, McAdoo (2008) found that slightly more than 50% of faculty responding to a survey indicated that their university lacked a clear definition of information literacy. Additionally, surveys from 2002, 2006, and 2008 of the Louisiana Academic Library Information Network Consortium found that the roles of faculty and librarians in this new information age seem to be unclear to librarians (Rollins et al., 2009). In fact, a review of the literature by Mazella and Grob (2011) demonstrated that, although faculty and librarians agree that students need help navigating this new information age, there is no agreement about what action should be taken and who should take it.

If the school as a learning organization recognizes that not all students enter the institution with knowledge of information literacy, then a clear information literacy policy would not only contain deterrents to cheating but would also address giving students the necessary knowledge so that their academic writing would meet appropriate standards. Institutions that develop these policies recognize that faculty and librarians often have differing views of their expected roles in teaching information literacy and that faculty in different disciplines may have different expectations for academic writing (Burkhardt, 2007). A shared definition of information literacy and a clear information literacy policy, then, should better enable a university to foster students' information literacy abilities.

Professional Learning Communities

Once an organization develops a shared vision for a problem, an institution's stakeholders align their goals to move in a common direction through team learning. Team learning, the fourth discipline, "develops the skills of groups of people to look for the larger picture that lies beyond individual perspectives" (Senge, 1990, p. 12). Dialogue among members of the college organization can lead to a shared vision for enacting change in the learning organization (Senge, 1990; Finch et al., 2010; Flood, 1999). Along with dialogue is the need for cooperation, networking, and "action learning" to solve problems and to effect change (Day, 2001). Within higher education, members of the institution can adopt these approaches by developing a common definition of information literacy and forming institutional policy collaboratively.

Collaborations within the university may occur through a professional learning community—a group of educators who share a vision to effect change to benefit student learning (Teague & Anfara, 2012; DuFour, 2003; Hord, 2008). Results from a focus group of faculty conducted by the Consortium for the Advancement of Adult Higher Education, for instance, indicated that development of a shared vision contributed to a university's ability to adapt and innovate (Finch et al., 2010). Teachers who participated in learning communities in another study showed that faculty and librarians valued collaborations to construct new curricula for information literacy (Elster, 2010).

Indeed, the professional learning community relies upon a shared vision and shared leadership to effect meaningful reform (Hord, 2008). Additionally, the professional learning community needs support—both "structural and relational" (Hord, 2008). Thus, participants in a learning community to improve information literacy need to come to consensus on the changes

that affect those student skills, feel empowered to decide appropriate curriculum, and be given adequate support to attain the community's goals.

Collaboration in the Learning Organization

Problems in the learning organization often call for collaboration to find solutions (Friend & Cook, 2007; Gajda, 2009; Patel, Petitt, & Wilson, 2011). Collaboration often plays a vital role in an organization's effectiveness (Patel et al., 2011). Various definitions exist for the term collaboration, but some consensus exists on the definition of collaboration in an organization. For instance, collaboration in a community is defined by Patel et al. (2011) as that which "involves two or more people engaged in interaction with each other, within a single episode or series of episodes, working towards common goals" (p. 1). Friend and Cook (2007) offered a similar definition: "Interpersonal *collaboration* is a style for direct interaction between at least two co-equal parties voluntarily engaged in shared decision making as they work toward a common goal" (p. 7). Both definitions emphasize that collaboration occurs when at least two people share a common goal or goals. Friend and Cook further delineate the voluntary feature and shared decision-making of collaboration in education. Deciding on shared goals and even shared definitions of problems, however, can be challenging (Friend & Cook, 2007; Montiel-Olverall, 2005).

In the learning organization, the discipline of teamwork relies upon that team's ability to clarify problems in the organization and to share in the vision for solving those problems (Senge, 1990; Senge et al., 2000). The ability of the team members to collaborate effectively contributes to the team's effectiveness. Successful collaboration within the organization includes several elements. First, the collaboration might be more effective if participation is seen as voluntary (Friend & Cook, 2007). Voluntary participation is particularly important to university teaching

faculty who are committed to research in their own disciplines (Goffee & Jones, 2009).

Participants in teams also expect support from the organization in the form of administrative support and adequate resources (Friend & Cook, 2007; Patel et al., 2011). Additionally, highly motivated professionals expect to share in the decision making process and must trust the individuals with whom they are collaborating (Friend & Cook, 2007; Montiel-Overall, 2005). Finally, professionals want to discern the importance or value of the collaboration to the organization (Friend & Cook, 2007).

Collaboration between librarians and faculty at the university level to improve student information literacy has proven valuable (Bean & Thomas, 2010; Floyd et al., 2008; Jackson, 2007). These collaborations are particularly valuable when responsibility is shared by faculty and librarians to construct curricula (Montiel-Overall, 2005). Additionally, curricula that are integrated across disciplines may be most effective when seeking to improve students' information literacy skills (Montiel-Overall, 2005).

Scholarship of Teaching and Learning

Boyer (1990) argued that teaching itself is an active practice that can be informed by research. Although faculty's knowledge in their fields is of primary importance, the practice of teaching itself is also important and can be enhanced through inquiry and discovery (Boyer, 1990; Felton, 2013; Hassel, 2013). Inquiry is based, first, upon student learning (Boyer, 1990; Felton, 2013). The teacher researcher identifies a problem and focuses on appropriate goals to solve that problem (Boyer, 1990; Felton, 2013). The scholarship of teaching also focuses on the methods for improving particular aspects of student learning (Boyer, 1990; Felton, 2013). When applied to the field of information literacy, teaching faculty and librarians must define those skills that need to be taught and the best methods for teaching those skills.

The scholarship of teaching also emphasizes that the faculty become learners (Boyer, 1990; Kreer & Cranton, 2000). The process of adding to faculty's own knowledge often begins with research on a particular problem (Boyer, 1990; Felten, 2013). Research sets the problem in the context of the larger body of knowledge. For instance, some studies indicated that faculty need to improve their own understanding of information literacy (Elster, 2011; Frier, Musgrove, & Zahner, 2001; Iannuzzi, 1998; Löfström & Nevgi, 2007). Studies also showed that faculty involvement in curriculum development to increase student' information literacy improved their own understanding of information literacy (Iannuzzi, 1998; Löfström & Nevgi, 2007). As adult learners, faculty may increase their understanding of particular content and of how to construct curriculum to deliver that content (Kreber & Cranton, 2013). When seeking to improve students' information literacy, faculty concerned with the scholarship for teaching will focus not only on the particular content but also on the most effective methods by which to teach that content. Specific professional development for faculty may increase those skills (Iannuzzi, 1998).

Conceptual Framework

Salient elements from the review of related literature informed the conceptual framework for this study. Figure 1 represents the relationships between those elements.

Universities need college students to engage in critical analysis of subject matter and to analyze and evaluate information. When confronted with the expectations for academic writing, millennial students are often confused and may resort to the type of copy-and-paste activities they have learned to depend upon in their daily lives. The resulting "patchwriting" and plagiarism fail to meet the standards of university faculty (Howard, 1995, p. 788). Figure 1 thus indicates that three concerns support the need for further study: higher-education expectations, the characteristics of millennial students, and inappropriate student behaviors.

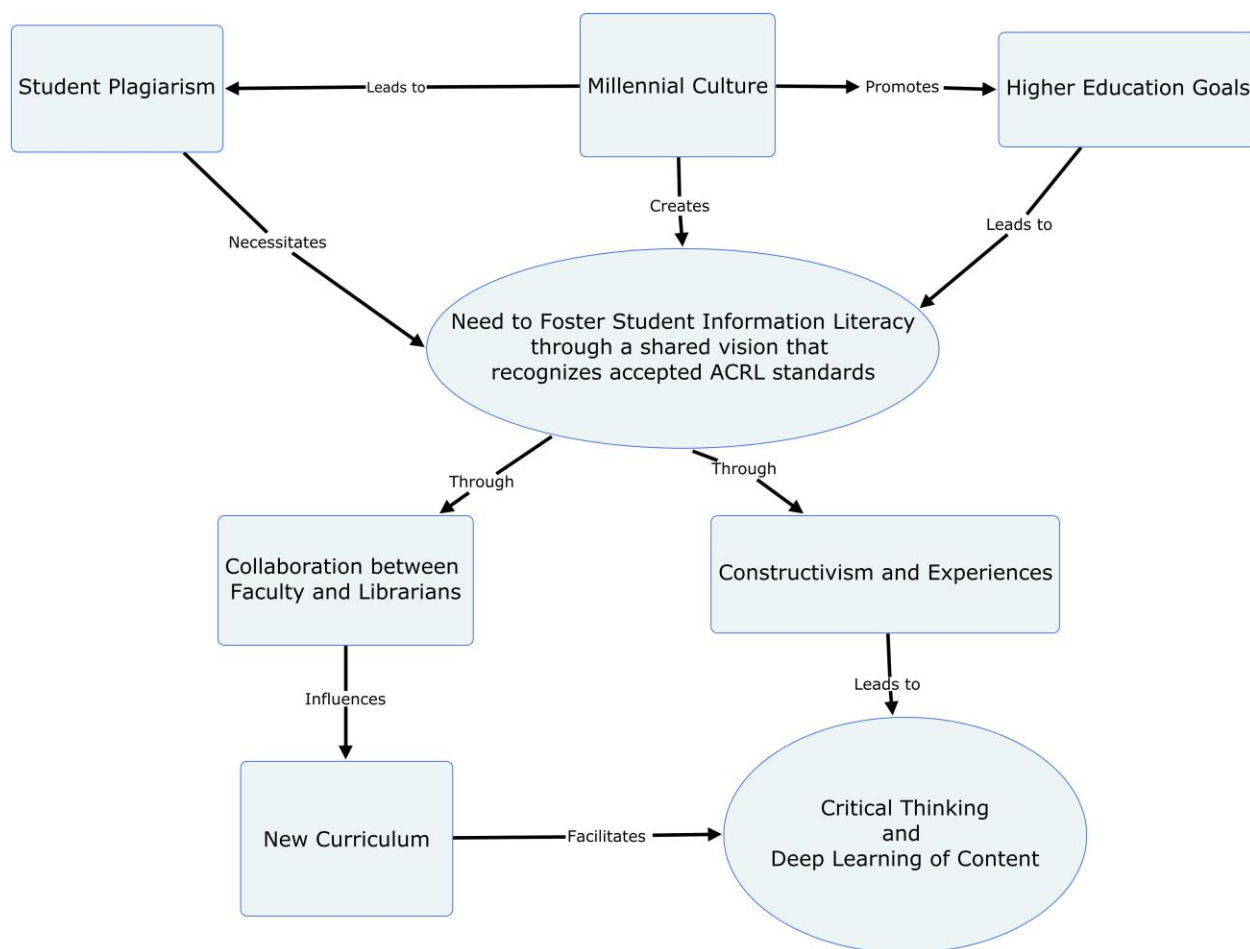


Figure 1. The relationship between the Millennial students' view of source use and plagiarism is depicted. Collaborations between faculty and librarians to create curriculum based upon constructivist theory can improve students' information literacy and critical thinking abilities.

Millennial students coming to the university live in a culture where information includes a desire to share information. Additionally, the use of technology to deliver information presents students with an increasing amount of source material. This increase, however, comes with challenges. Students must have the technical knowledge to access the material. This technical ability, however, is useless without the ability to determine the usefulness and validity of the information and the appropriate means by which to credit source material in their own academic writing.

This study's conceptual framework includes several components representing responses to the need for developing students' information literacy. First, faculty are concerned with the level of academic writing at the college level. The framework of this study recognizes the collaboration between faculty's work to improve the writing abilities of students and librarians' efforts to improve students' abilities to access, evaluate, and use sources. An examination of the research regarding the problems associated with student academic writing indicates that two problems, inadequate writing abilities and poor information literacy skills, intersect and that an accepted term for this intersection is information literacy. This study, then, recognizes that universities need to foster student information literacy.

The framework also employs the standards for information literacy set by the Association of College Research Librarians (ACRL, 2000). The standards set by the ACRL for information literacy reinforce the connection between librarians' concern with information literacy and faculty's concern with students' writing abilities (Albitz, 2009). Teachers expect their writing students to demonstrate critical thinking through their writing (Albitz, 2009). This expectation coincides with librarians' expectations for students to evaluate information critically.

This study also recognizes that collaborations between faculty and librarians may successfully improve students' research and writing abilities. Students must use critical thinking to read and reflect upon source material and incorporate the source into their own writing. However, studies have demonstrated that millennial students often lack the abilities to find, evaluate, and use sources for academic purposes.

Constructivist learning theory suggests that knowledge develops through experience (Bruner, 1996; Novak, 2010). Students often enter the university without the necessary information literacy abilities, but studies demonstrated that those abilities can be improved

through information literacy instruction. Therefore, the conceptual framework recognizes that students' abilities in these areas can be improved with carefully constructed curriculum through which faculty and librarians collaborate to foster information literacy abilities.

The conceptual framework illustrates the need for collaboration between faculty and librarians to respond to problems with student academic writing. A review of studies of collaboration between faculty and librarians demonstrated that such collaborations have improved student writing and that some institutions of higher education have instituted formal information literacy programs.

Summary

A search of the literature demonstrated that many educators are concerned with the weaknesses of student academic writing. Studies have been conducted that determined students' lack of abilities to use sources effectively in their writing. The literature review also demonstrated that faculty and librarians have collaborated to improve these abilities and the results of those collaborations have been effective. However, institutional programs to encourage this participation are limited.

Chapter Three focuses on the qualitative research design for this study. The chapter describes the methodology that was used to understand how the University of Central Florida planned and implemented its Information Fluency Initiative.

CHAPTER 3

RESEARCH METHODOLOGY

A review of the literature for this study demonstrated that many educators believe that students' academic writing should be improved. Additionally, studies have determined that, although many students lacked the appropriate information abilities to use sources effectively in their writing, instruction in those abilities improved students' writing (Burkhardt, 2007; Neely, 2002). Given the positive correlation between information literacy instruction and students' information literacy abilities, researchers have increasingly called for organized institutional information literacy programs. The review of the literature demonstrated, however, that most institutions have been slow to adopt formal plans for institutionalizing information literacy programs (Breivik & Gee, 2006; Burkhardt, 2007). Indeed, to do so is a complex undertaking. Because a thorough examination of one institution's development and implementation of an institutional plan may inform others as they consider program development, this study described one university's information literacy program and explored how the university developed, planned, and implemented that program.

Chapter 3 provides a description of the qualitative research design for this study to examine the University of Central Florida's Information Fluency initiative. Additionally, the chapter describes the methods for site selection, protection of participants, and data collection methodologies. This chapter also outlines the data analysis methodologies more fully discussed in Chapter Four.

Research Design

The research question for this study was: How did a state-supported university plan and implement an information literacy program? The research question drives data collection and methodology (Eisner, 1998; Howe & Eisenhart, 1990; Johnson & Christenson, 2008). Because the research question necessitated a field-based approach to data collection, employed the researcher as tool in data collection and data analysis, and was directed towards a holistic interpretation of a complex environment, this study used a qualitative research approach (Eisner, 1998).

The justification for a qualitative research approach lay in several arguments. Qualitative studies often explore situations in order to describe a complex relationship in a particular context (Marshall & Rossman, 2006; Patton, 2002). Qualitative research also seeks meaning in complex situations (Eisner, 1998). The processes involved in establishing any institutional program in a university involve the interactions of many participants and departments, a complex undertaking (Finch et al., 2010). Qualitative research enables the researcher to “focus on complex interdependencies and system dynamics that cannot meaningfully be reduced to a few discrete variables and linear, cause-effect relationships” (Patton, 2002, p. 41). A qualitative study of the complexities involved when implementing an institutionalized information literacy program can help the educational community understand how this institution planned and developed its program.

Because qualitative researchers also want to achieve a holistic perspective of phenomena, the researcher “searches for the totality or unifying nature of particular settings” (Patton, 2002, p. 59). The issues surrounding student academic writing involve faculty, librarians, and administrators because all of these stakeholders want to improve student writing. A few

institutions have already approached the problem of information literacy from a holistic standpoint by establishing programs designed to increase students' information literacy abilities (MacMillan, 2009; Meyer et al., 2008; Warner, 2009). A holistic study of one of these programs provided a rich description of how stakeholders developed, established, and implemented this shared vision for improving students' information literacy.

Qualitative research, as naturalistic inquiry, seeks to understand a particular phenomenon without manipulation (Patton, 2002). Consequently, qualitative research takes place in a real-world setting (Eisner, 1998; Jacob, 1988; Patton, 2002). Qualitative research also describes the real world so that readers might "visualize what a place or process is like" (Eisner, 1998, p. 89). Merriam (2001) noted that "research focused on discovery, insight, and understanding from the perspectives of those being studied offers the greatest promise of making significant contributions to the knowledge base and practice of education" (p. 1). A qualitative study of one information literacy program required the researcher to have "direct and personal contact with people under study in their own environments" (Patton, 2002, p. 48). This qualitative case study of one information literacy program filled with rich description of the participants' experiences and perceptions may contribute to educators' understanding of an organized, institutional information literacy program.

Finally, qualitative research is interpretative in nature and leads to insights gained from experiences (Eisner, 1998). Those insights, based upon thick descriptions of experiences, may seek to explain the perceptions of participants or explain how a particular process works (Eisner, 1998). The researcher also interprets data to seek understanding of complex human experiences (Eisner, 1998). Qualitative research for the current study was based on the argument that it could

add to the knowledge of educators who wish to understand how a university developed a program to improve students' abilities to write academic papers.

The research question for this study was: How did a state-supported university plan and implement an information literacy program? Implicit within the question for this study was the need to focus on one particular program, that is, a case. Case studies allow researchers to analyze single systems that are “intrinsically bounded” (Merriam, 2001, p. 27). The fact that a case study has boundaries and is limited to a single unit—whether that unit is one student, one class, or one program—distinguishes it from other types of qualitative studies (Merriam, 2001; Stake, 1995). This case study of UCF's Quality Enhancement Plan was bounded by the five-year span of that plan and by those who participated in the program itself. Thus, a case study design was appropriate because this study described a particular program in detail so that educators might understand the experiences of the participants.

A second rationale for using a case-study approach lay in the argument that a careful case study using document analysis, in-depth interviews, and thoughtful observations enables the researchers to develop a rich description of a single program that adds to understanding through layers of information (Eisner, 1998; Merriam, 2001; Stake, 1995). The multiple data sources informing case-study research allow the researcher to gain the holistic perspective and triangulation demanded of rigorous qualitative study (Patton, 2002). Those “multiple sources of evidence” offer the context through which conclusions are drawn (Eisner, 1998, p. 55). Therefore, this case study made use of document analysis, in-depth interviews, and careful observations to gain insight into how an institution planned and implemented an information literacy program.

Researcher as Tool

Qualitative research seeks understanding and knowledge; however, the researcher must also have knowledge before beginning any study. Comprehending the research subject before beginning the research process is necessary in any research project (Eisner, 1998; Patton, 2002). Qualitative research, in particular, relies upon the connoisseurship of the researcher (Eisner, 1998). My connoisseurship as a writing teacher for 23 years at a community college informed the selection of the topic and guided the literature review. My connoisseurship of faculty perceptions and my knowledge gained from a thorough search of the literature informed the data collection and analysis.

As an English faculty member at a community college, I have struggled with the problems of identifying plagiarism and have struggled with my responses to individual cases of plagiarism. Students in my freshmen writing classes often copy and paste information from the Internet and “patch” (Howard, 1995, p. 788) it into their papers with no citation. In fact, many students have questioned the standard interpretations of plagiarism. As the literature review reflected, other faculty have encountered challenges when discussing the need for documentation with students (Howard, 2007; Neely, 2002; Schmelkin et al., 2008). Further, the review of the literature for this study indicated that faculty are dissatisfied with the quality of student writing, as well as with students’ abilities to process information critically (Belter & du Pré, 2009; Borg, 2009; Compton & Pfau, 2008).

Faculty at my own college and at professional conferences often bemoan the challenges students face when writing research papers which require an ability to find acceptable academic sources, the ability to use those sources adequately, and the ability to cite the sources correctly. I have also been increasingly concerned with students’ struggles to use sources and to integrate

those sources into their own writing. In particular, I have been interested in how access to the Internet and the ability to copy and paste information have affected student academic writing. As a faculty member, I am cognizant of the complexity of this problem and have a commitment to the collaborative challenge of improving students' writing abilities.

Qualitative research is typically conducted in a natural setting with the researcher as a tool in collecting data as she makes notes based upon document reviews, interviews, and observations (Eisner, 1998; Marshall & Rossman, 2006; Patton, 2002).² As an instrument of data collection and data interpretation, the researcher must find a balance between the subjectivity inherent in any research and the quest for objectivity needed for research analysis. The term “empathic neutrality” represents the need for an unbiased analysis—neutrality— of the particular phenomenon studied (Patton, 2002, p. 49). However, because the qualitative researcher also relies on her connoisseurship to interpret her experiences, a natural tension develops between the need for neutrality and the need to rely upon that connoisseurship to interpret the data. As a qualitative researcher, I sought to accurately describe the actions and perceptions of participants in an information literacy program without preconceived expectations. I also relied upon my connoisseurship from the literature review and my experiences as a writing teacher to interpret the meanings of participants' experiences.

Site Selection

Site selection for a case study is a deliberative process that requires careful consideration by the researcher (Patton, 2002). The purpose of this study was to examine how a state-supported university planned and implemented an information literacy program. The focus on a state university was based on the assumption that state universities are deliberately set up to

² Because I am a female, when referencing the words researcher or critic as a singular noun, I have chosen to use the first person feminine “she” or “her.”

serve a broad population. A case study approach required the purposeful selection of a state university that had such a program.

First, key criteria for site selection relevant to the case study should be established (Merriam, 2001; Patton, 2002). These criteria help guide the site selection and frame the research (Merriam, 2001; Patton, 2002). An analysis of the literature reviewed in Chapter Two provided criteria for the identification of an information literacy program that would yield rich data to contribute to readers' understanding. Many of the research studies in the review of the literature acknowledged the importance of the Association of College Research Libraries' (ACRL) information literacy standards (Burkhardt, 2007; McAdoo, 2008; Saunders, 2008). Because these standards have also been increasingly important guidelines for the implementation of information literacy assessments at many colleges (Saunders, 2008), the first criterion for site selection was to find an institution that used the ACRL's information literacy standards when developing its own information literacy program.

The ACRL's information literacy criteria have also been accepted as a standard used when granting accreditation to institutions (Saunders, 2008). Therefore, a second criterion for site selection was a program considered viable by a primary accreditation agency, the Southern Association of Colleges and Schools [SACS]. SACS does not explicitly require information literacy programs in colleges, but it does require colleges to institute Quality Enhancement Plans to improve a perceived weakness. That some colleges in the region have chosen information literacy instruction as their QEP focus to improve student learning (Southern Association of Colleges and Schools [SACS] 2011) indicates that those institutions fulfill that criterion. Further, because any QEP must be a college-wide effort, be assessed, and lead to permanent changes at the institutional level, this second criterion for site selection for this study led to

identifying a school that had instituted a serious plan for improving students' information literacy abilities as part of its accreditation process.

Finally, the review of the literature in Chapter Two noted that researchers have consistently called for greater involvement of the university community in developing a holistic approach to the problems concerning student academic writing (Breivik, 2005; Burkhardt, 2007; Neely, 2002). A third criterion, then, for site selection was an institution that involved faculty, librarians, and administrators in the planning and implementation of an information literacy program.

There were several reasons for selecting The University of Central Florida (UCF) as the site for the case study. First, the University of Central Florida's Information Fluency plan has been recognized by some researchers as successful and has been used as an example for other schools to follow (Alexander, 2009; Gibson, 2007; Katz, 2007; Lerner, 2006). UCF also based its plan on the ACRL's definition of information literacy (University of Central Florida [UCF], 2006), the first criterion for selection. Investigation of UCF's web site also revealed that this program had been developed as part of a QEP in 2005 (UCF, 2006), the second criterion. Additionally, the school had, in developing its QEP, initiated faculty training and structured faculty-librarian collaboration (Information Fluency Office, 2012). Because the university developed its plan through a school-wide dialogue and involved stakeholders across the institution, UCF met the criterion for holistic involvement (Information Fluency Office, 2012).

UCF's Information Fluency website also noted that this use of the term, information fluency, was a combination of the school's attention to information literacy, technology, and critical thinking (UCF, 2006). The school's organized approach to developing the vision for its information fluency QEP and its linking of critical thinking to technology and information

literacy reflected the conceptual framework for this study which proposed a relationship between critical thinking, information literacy, and improved student writing. Finally, the Information Fluency initiative at UCF fit the requirements for a descriptive case study because the rigorous accreditation process had yielded data rich in information, not only as documentation but as a result of people working together in a complex environment to create a shared vision for their institution.

Access

For this study, I gained permission from the University of Central Florida to conduct a case study of its Information Fluency Initiative. Initial contact with the QEP director, Martha Marinara, indicated that entrée was possible. Appendix A of this study includes the initial contact letter sent to Dr. Marinara. Subsequent electronic communications with Dr. Marinara confirmed that the university was amenable to the case study. Subsequently, a request for access was submitted to UCF's Institutional Review Board. Because the study had been vetted by the University of North Florida's IRB board, UCF granted expedited permission. A copy of UNF's permission statement and UCF's permission are included in Appendices B and C of this study.

Interview Participants

I then needed to assure the participation of the University of Central Florida's Quality Enhancement Plan participants for observations and interviews. Based on conversation with the director, Martha Marinara, all involved in planning and implementing the program were asked to participate. Upon Dr. Marinara's recommendations, 11 members of the original planning committee were asked to participate in semi-structured, in-depth interviews (Patton, 2002; Merriam, 2001). The participants had been leaders of the school's accreditation team, librarians, and faculty involved in planning and developing the QEP, and faculty who participated in

specific information fluency projects developed as part of the initiative. Nine of the original contacts participated in interviews. Because interviewers in qualitative research may also use a “snowball” technique in locating participants, that is, ask interviewees to identify other major stakeholders in a program (Patton, 2002, p. 237), I used this technique to broaden the original interview pool. As I was conducting interviews, I asked participants from the Information Fluency Office to suggest additional participants and therefore conducted five additional interviews based upon those suggestions.

Because this case study involved investigating the planning, development, and implementation of a particular program, invitations were naturally based upon the roles participants played in the initiative. Further, some participants held double roles as both administrators and librarians or administrators and faculty; thus, the number of participant roles identified in the following list is larger than the number of interviews conducted. Participants included: three members of the original accreditation team, seven administrators, three members of the Information Fluency Office, six faculty members, three librarians, and one participant from the Center for Distributed Learning,

Finally, I observed presentations for the Information Fluency strand of UCF’s annual Summer Faculty Development Conference during which presenters shared results from curricular projects previously funded by the school’s Information Fluency Office. I also observed a final meeting where faculty shared their plans for new projects. In particular, I was able to note the interactions among faculty, librarians, and the members of the team participating in the Information Fluency Initiative. Because direct observation allows the researcher to be open to contextual nuances to develop a “holistic perspective” (Patton, 2002, p. 262), I observed pertinent meetings among major stakeholders in the Information Fluency initiative at UCF to

increase my understanding of how that program continued to implement information fluency policy. Detailed observation field notes were kept as these are essential to provide the analysis of the data (Merriam, 2001; Patton, 2002).

Informed Consent and Confidentiality

The educational researcher has a responsibility to insure that no one will be harmed through a study (Marshall & Rossman, 2006). Care was taken to insure the confidentiality of the data. Digital audiotapes of interview sessions were stored on a secure server that was password-protected. After transcription of the audiotapes from interviews and of the field notes, all data were stored on a password-protected, secure server. The data were accessible only to me, and the original field notes and the audiotapes were destroyed. Participants were given pseudonyms to provide confidentiality. Although these pseudonyms are in alphabetical order, participants were not given these identifiers in the order they were interviewed to protect confidentiality; nor do the pseudonyms correspond to anything in participants' given names. Additionally, the letter 'I' was not used as an identifier to avoid confusion in text with the first person pronoun. The group of 14 people interviewed included administrators, librarians, and faculty who were involved in the planning, development, and implementation of the Information Fluency Initiative. The lists of participants' names and their pseudonyms were kept on the secure server, accessible only to me and my major professor.

Because qualitative researchers have an ethical obligation to be transparent about their research methodology (Marshall & Rossman, 2006; Patton, 2002), participants who were interviewed were informed of the study's purpose and were assured that care was taken to protect participants' privacy. Participants who were observed in meetings were aware that they were being observed and were informed of the study's purpose and methodology (Patton, 2002).

Letters were sent to all interview participants explaining the study's purpose and asking for their participation. Participants also were assured of confidentiality (See Appendices D and E for copies of the introductory letter and consent form).

The research study needed to assure the security of the data and the protection of participants. Institutional Review Boards serve as protectors of human participants (Marshall & Rossman, 2006). Approval by the University of North Florida's Institutional Review Board of the research design assured that the proposed study was ethically responsible and posed no risks to participants. The application included copies of the introductory letter and informed consent forms to be used, details of the study, and expected questions to be used in the semi-structured, in-depth interviews.

Evidence of satisfactory completion of the Collaborative Institutional Training Initiative (CITI) required by UNF's Institutional Review Board was also included in the application for approval submitted to the Institutional Review Board of the University of North Florida. Additionally, an email was provided granting approval by UCF's Institutional Review Board dated February 5, 2013. The IRB for the University of North Florida approved the case study of UCF's Information Fluency Initiative on February 27, 2013. Copies of the IRB approval from the University of North Florida and University of Central Florida are included in Appendices B and C of this study.

Data Collection

A case study requires more than one methodology for data collection because "no single source of information can be trusted to provide a comprehensive perspective" of a case (Patton, 2002, p. 306). Combining document analysis, in-depth interviews, and careful observation can yield holistic understandings of complex systems (Patton, 2002). The current case study's

approach to make use of relevant documents, interviews, and observations provided the perspective needed for a holistic understanding of UCF's Information Fluency initiative.

Data from documents can be particularly advantageous for qualitative research "because they can ground an investigation in the context of the problem being investigated" (Merriam, 2001, p. 126); therefore, documents that were relevant to understanding UCF's Information Fluency initiative and written by stakeholders were examined. First, documents from the planning of UCF's Information Fluency Initiative were studied. Relevant documents written by stakeholders during the QEP process were also examined. These documents included the original plan, the five-year evaluation, newly developed curriculum plans, and other documents related to the planning and implementation of the Information Fluency Initiative. Mining data from documents might also suggest other paths of inquiry to the researcher (Patton, 2002). As the study progressed, documents written by stakeholders for the Information Fluency Initiative, specifically issues of the *Information Fluency Journal* published by the Information Fluency Office, were also examined to broaden the database for the study.

After selecting a study site and examining documents, the case study researcher must also carefully choose individuals to interview (Merriam, 2001). The researcher uses interviews to gain insight into participants' individual perspectives that might not be apparent through observation (Patton, 2002, p. 341). I used knowledge from study of the literature and my experience as a writing teacher working with librarians to develop carefully constructed questions for the semi-structured, in-depth interviews. Key stakeholders involved in the Information Fluency Initiative, people who were involved in the planning and implementation of the program or evaluation of curriculum changes, were, therefore, interviewed for this study.

For this case study, I conducted 14 in-depth interviews of participants. Most interviews were an hour and a half in length although two were shorter due to participants' time constraints. The transcriptions for the interviews were between 6 and 25 pages in length. Because the interviewer should "provide an atmosphere conducive to open and undistorted communication between the interviewee and respondent" (Holstein & Gubrium, 1995), interviews were conducted privately in an environment comfortable to the participant. Because the interview is a "dynamic, meaning-making occasion" to allow the researcher to contribute to understanding of participants' experiences (Holstein & Gubrium, 1995, p. 9), careful attention was paid in the analysis of data to report interviewees' responses correctly. During each interview, the participant was invited to examine the transcript of the interview when completed; no one made that request. Additionally, a draft of Chapter Four, the analysis of data, was sent to all interviewees to provide opportunity to comment on any misunderstandings or to ask for changes in that chapter. No suggestions for changes were offered.

Interview questions themselves are important because they frame the interview process. The interview questions (see Appendix F) provided structure so that "the same basic lines of inquiry are pursued with each person interviewed" (Patton, 2002, p. 343). A semi-structured interview process allowed the researcher to add questions as needed if new areas of interest occurred or if participants reflected divergent perspectives (Merriam, 2001). Care was also taken when constructing interview questions. A researcher must know "enough about the topic to ask meaningful questions in language easily understood by the informant" (Merriam, 2001, p. 85). I used knowledge from the study of the literature and my experience working with faculty and librarians to develop carefully constructed questions.

Interview questions were structured using an open-ended format. Patton (2002) suggested that open-ended questions are best suited to the types of data necessary for qualitative inquiry. These questions do not ask for a “standard fixed-response” (p. 353) because the qualitative researcher does not seek to find predetermined data. Rather, the qualitative researcher seeks “description of an episode, a linkage, an explanation” (Stake, 1995, p. 65). I therefore carefully constructed the interview questions, then, to allow participants to relate their unique experiences. The qualitative researcher may also vary the types of questions asked of participants (Merriam, 2001; Patton, 2002). For example, questions might ask participants to describe an experience, give their opinions, identify pertinent background information, or express their feelings (Patton, 2002). Further, careful sequencing of questions was important because sequence may contribute to gathering rich data; for example, participants’ descriptions of activities may precede questions that ask for opinions and feelings (Merriam, 2001; Patton, 2002). Although I used the same questions for each participant, I was also aware that participants had different roles to play in the information fluency initiative. Therefore, I also at times asked follow-up questions to clarify a participant’s responses.

To insure the rigor needed for validity, interviews were audio-taped using two devices, a digital recorder and a smart pen. The interviews were later transcribed. Notes were taken during the taping and reviewed immediately after the interview (Patton, 2002). Additional notes were made after each interview to record observations and new areas for exploration. An outside, experienced transcriber was used for the first three interviews. To insure reliability of data transcription, however, I read each transcription at least once while listening to the tape to verify that the transcriptions were accurate. I used the Microsoft Voice Recognition feature to read the remaining interviews aloud and construct transcripts. I carefully reread each interview transcript

while listening to the recording to insure the reliability of the transcriptions. All transcriptions were kept on the password-protected, secure server.

Finally, observations were conducted to note the interactions among faculty, librarians, and the members of the team participating in the Information Fluency Initiative. Such direct observation was important to the researcher to be open to contextual nuances of the initiative and to develop a “holistic perspective” (Patton, 2002, p. 262) of the initiative. Thus, I observed presentations given by people who were participating in the information fluency strand of UCF’s 2013 annual summer faculty development program. That program, begun by UCF’s Faculty Center for Teaching and Learning, involved university personnel from many areas in a week-long internal conference. Presenters for the information fluency strand of the conference reported on projects they had completed or projects that were in process. Presenters were informed of my research and gave permission for the observations. I kept careful observation notes of these presentations and included these in the data for this study. On the final day of the conference, participants for the information fluency strand met and detailed the plans they had developed for their own projects next year. This session was recorded with the permission of the participants and later transcribed.

While attending UCF’s Summer Faculty Development Conference, I observed the presentations of participants involved in current information fluency projects. I also observed a final meeting during the conference in which new participants shared their plans for new projects. Observations from both meetings increased my understanding of how that program continued to implement information fluency policy. Detailed observation field notes contributed to the database for the study (Merriam, 2001; Patton, 2002). Because the process of qualitative data collection is flexible and open to change (Patton, 2002, p. 246), these observations led to

interviews of additional faculty to increase my understanding of faculty roles in creating the information fluency projects.

Data Analysis

Quantitative research seeks through random selection of samples from a given population to show a relationship between two or more variables (Hair, Black, Babin, & Anderson, 2010; Patton, 2002; Spatz, 2008). Generalizing from the analysis of data in quantitative research, the researcher endeavors to demonstrate that what is evident in the sample may be generalized to its broader population (Hair et al., 2010; Johnson & Christensen, 2008; Patton, 2002). In education, quantitative research can measure the outcomes of actions by faculty or the school.

Qualitative inquiry, on the other hand, produces detailed descriptions that produce “a feeling for the distinctive characteristics of the case” (Eisner, 1998, p. 39). Generalizing for the qualitative researcher involves expanding “the range of interpretations available to the research consumer” (Donmoyer, 1990, p. 194) so that he or she may understand more deeply the complexity inherent in human interactions. The interpretations of the data from the study of a unique case may in turn allow the reader to “enrich his or her understanding of an ideal type by accommodating the novelty of the particular case” (Donmoyer, 1990, p. 196). Analysis of data from this case study of UCF’s information literacy program will enable educators, then, to understand how that program was planned and implemented so that they might enrich their understanding of how a program was developed.

To assure transparency, I have made data collection and procedures public, identifying “a clear statement of the process and outcomes of data analysis and a discussion of how they address the research questions” (AERA, 2006, p. 36). I established a clear “audit trail” (Patton, 2002, p. 93), in order to report research decisions in detail. I strove to “minimize bias, maximize

accuracy, and report impartially” (Patton, 2002, p. 93). Through structural corroboration, consensual validation, and referential adequacy, discussed in further detail in the credibility section of this chapter, I sought to identify common patterns and relationships that increased understanding of UCF’s Information Fluency Initiative (Eisner, 1998).

This qualitative case study of one information literacy program yielded rich, descriptive data to help in understanding how the program was planned and implemented. Before conducting the interviews, I read through UCF’s Information Fluency Quality Enhancement Plan entitled *What If: A Foundation for Information Fluency* (UCF, 2006) and took notes so as to identify relevant phrases and ideas regarding concepts such as information literacy, information fluency, critical thinking, and program planning as discussed in Chapter Two. Content analysis of documents—linked to the research question and conceptual framework—serves to contextualize the case (Marshall & Rossman, 2006). The process of content analysis included recognizing recurring “words or themes” related to the question of how UCF planned, developed, and implemented the Information Fluency Initiative (Patton, 2002, p. 452). Later, I returned to the documents and used the literature discussed in Chapter Two as a screen to identify relevant ideas to be placed in the domains developed from the analysis of the interview transcripts. Analysis of the Information Fluency Initiative documents, then, yielded further understanding of how the initiative was planned and developed.

After interview data were collected, multiple readings of the interview transcripts, in addition to close study of interview field notes, began the process of simplifying data to construct significant patterns and themes (Patton, 2002). I first read through the transcriptions and constructed matrices of the chronological events which included the planning, development and implementation of the initiative. I then conducted a second and third reading in order to identify

domains (Hatch, 2002), that is, shared ideas or relationships across interviewees. As I identified domains, I constructed new matrices for these ideas. Finally, after constructing the matrices, I wrote memos to clarify my understanding of how the data related to those domains.

The process of educational criticism also guided data analysis and recognized that analysis of data relies upon the researcher's level of experience and connoisseurship to describe and interpret findings rigorously and reflexively (Eisner, 1998). It is the expert who is able to look at a situation and recognize what is important and what should be ignored (Eisner, 1998). Therefore, educational criticism also shaped data analysis because it offered a process through which I was able to use my own connoisseurship to describe and facilitate understanding of findings from multiple sources. My connoisseurship as a writing teacher and my understanding of the literature informed the analysis of the data.

Educational criticism recognizes that the researcher's connoisseurship leads to interpretations with insights (Eisner, 1998). Educational criticism also seeks a deeper understanding of existing educational practice (Eisner, 1998). It also recognizes that study of educational practices can help in understanding the situations involving a particular problem (Eisner, 1998). Therefore, a study of an effective information literacy program, based upon educational criticism, may give educators an understanding of the approaches one institution used to develop students' understanding of information literacy.

The structure for educational criticism employs four dimensions—description, interpretation, evaluation, and thematics—to increase perceptions and understanding of events (Eisner, 1998). The first goal of the critic is to use description of data so that the reader clearly visualizes events or programs. This study makes use of language to describe the experiences of

faculty, librarians, and administrators who have been involved in the information literacy program at UCF so that other educators may visualize participants' experiences.

The critic also gives meaning to the data through interpretation (Eisner, 1998; Merriam, 2001; Stake, 1995). My connoisseurship was relevant in that I did not ignore my perceptions and knowledge but instead used them to understand that which I was studying (Heshusius, 1994). Heshusius noted that this "participatory consciousness" (p.16) asks that the researcher fully commit to an open attitude towards the phenomenon being interpreted. At the same time, participatory consciousness accepts the position that a researcher is conscious of her own understandings of events. When observing and listening to participants for this study, I sought to develop my own participatory consciousness and was open to viewing information from a perspective other than my own. To interpret and analyze the study's data, however, I drew upon my own experiences as a writing teacher and the knowledge gained through the search of literature. Thus, this study conceptualized the experiences of participants in the information fluency initiative at UCF, and gave meaning and explanations to events through my connoisseurship and through theoretical understandings from the literature.

Educational criticism also makes use of evaluation in order to determine the value of the event or program (Eisner, 1998). A school, as a social institution, fosters "the growth of human intelligence, nurtures curiosity, and yields satisfactions in the doing of those things worth doing (Eisner, 1998, p. 99). The critic, then, not only describes the educational setting and interprets the meaning of what is happening but must also appraise that setting for its educational value (Eisner, 1998). This study of one institution's information literacy program made use of document analysis, in-depth interviews, and observations to find the value of UCF's information

fluency initiative to its participants. Analysis of the data collected indicated how the initiative has contributed to a shared meaning of information fluency by participants.

Finally, educational criticism seeks to understand the meanings of experiences in terms of pervasive themes of potential interest to others (Eisner, 1998). Unlike quantitative research which seeks generalizability through random sampling, qualitative research seeks heuristic understanding of particular experiences (Donmoyer, 1990). The understanding derived from qualitative research in the form of recurring themes allows the reader to transfer knowledge from the study of one unique experience to other experiences with which the reader is familiar and which share characteristics in common with the focus of the research (Eisner, 1998). Through processes of inference and inductive thinking, I identified recurring themes and patterns evident in this particular program.

Inductive analysis of the data (Hatch, 2002) also contributed to data analysis. Domains, the key to inductive analysis, were created made up of categories understood by the participants in the study (Hatch, 2002). Further, embedded within the process of data analysis was the use of the literature from educational leadership and other areas to elucidate the recurring concepts and themes identified. Lenses from the initial literature review proved fruitful as ways to find meaning in the data and to provide a heuristic understanding of UCF's initiative. Other lenses from the literature were identified as relevant during data analysis, a process that further underscores the recursive nature of qualitative inquiry.

Credibility

To achieve credibility in this study, careful attention was paid to the manner in which data were collected and analyzed. Competent data collection and analysis are important for the qualitative researcher to achieve credibility (Howe & Eisenhart, 1990). This chapter has

provided the transparency required of empirical research, the logic used for the design of the study, and the manner by which data were collected and interpreted (American Educational Research Association, 2006).

Analysis in educational criticism includes seeking a “confluence of evidence” (Eisner, 1998, p. 110). Thus, the present study used data from document study, observations, and interviews to build the “structural corroboration” of evidence to provide the warrant for the increased understanding expected of qualitative research (Eisner, 1998, p.110). Triangulation of data from documents, observations, and interviews permitted construction of a holistic perspective on experiences. Interviews in particular provided data relevant to the perceptions and feelings of participants (Patton, 2002). The rigor of data transcription supports credibility in representing participants’ responses (Holstein & Gubrium, 1995; Merriam, 2001). As an interviewer, then, I was conscious of the need to record raw data as honestly as possible (Patton, 2002).

The use of educational criticism in data analysis provided a process for building “consensual validation,” that is, agreement gathered from either experts or from evidence (Eisner, 1998, p. 112). The multiple layering of data natural to a case study provided the consensual validation required of educational criticism (Eisner, 1998, p. 112). In addition, analysis of data informed by the thorough literature review enabled the use of expert knowledge. The need for educational criticism to provide “referential adequacy” (Eisner, 1998, p. 113). added to the credibility of the study; that is, detailed descriptions of how interpretations connected to the data from documents, interviews, and observations provided rigor to the process of data analysis

Contextualizing a Single Case Study

As a qualitative case study of one program, the present study might be perceived as limited in scope. However, the results from qualitative research do not have to generalize to a population as in quantitative research (Donmoyer, 1990; Patton, 2002). Rather, the qualitative researcher describes a phenomenon to increase the understanding of those who may read the research reports. Through “vicarious experience,” the readers of qualitative research may gain valuable knowledge of unique cases they would be unable to experience (Donmoyer, 1990). This study’s strength lies in its ability to add to the understanding of educators who wish to increase students’ information literacy and fluency. The number of studies surrounding plagiarism and students’ research habits indicated a need for better understanding of procedures that can improve students’ abilities to use scholarly sources. Rich descriptions of the uniqueness of UCF’s information fluency initiative gave insight into how that institution planned and implemented its program and, thereby, should offer faculty and administrators in other institutions of higher education understanding as they develop their own initiatives.

The descriptive information of the program’s genesis and first years was limited by the documents still available and participants’ perceptions of their past experiences with the program. However, because the design of a case study requires multiple sources of information, “the fieldworker is able to use different data sources to validate and cross-check findings” (Patton, 2002, p. 306). Use of document review, observations, and interviews gave a holistic perspective of UCF’s information literacy program and allowed the researcher to overlay the historical content of the documents with participants’ current reflections.

Because this qualitative study required my own observations, interviewing, and interpretation of data, subjectivity was a part of the research process (Stake, 1995). The

researcher as tool who employs her own experience to inform interpretations provides unique insights that increase the reader's understandings (Eisner, 1998). Interpretations of the data gathered in this study depended upon my own ability to construct meaning from my observations and analysis. My connoisseurship as a writing teacher and knowledge gained from review of the literature informed my perceptions and interpretations of the information fluency initiative at UCF. Along with assiduous attention to data-analysis strategies and transparency in describing data analysis processes, the rigor supporting the study was demonstrated.

Summary

A qualitative, single-case study design was chosen for this study. A study of one successful program was warranted because, through description, I was able to describe qualities and characteristics of an institutional information literacy program that may inform educators interested in adding to their own knowledge of this topic. The UCF Information Fluency Initiative was chosen as the appropriate site for the case study because UCF used the ACRL's information literacy standards, combined information literacy with critical thinking and use of technology, and developed a shared vision for its program as part of the university's quality enhancement plan. In this qualitative case study, data were gathered through document analysis, in-depth interviews, and observations. Data analysis strategies included the use of the four dimensions of educational criticism, inductive analysis, and the use of concepts from relevant literature. This chapter also discussed the role of the researcher in the research process, efforts to achieve credibility and the process of generalization from a single case study.

Chapter Four describes the data analysis processes used in the study. The chapter describes the results of that analysis that contributed to understanding how one university successfully developed a professional learning community.

CHAPTER FOUR

DATA ANALYSIS

The research question for this descriptive case study was: How did an institution plan and develop an information literacy program? Interviews of participants, analysis of documents, and field observations yielded rich and distinctive data. This chapter describes the methods used in the analysis of those data.

In reporting qualitative data, the researcher has many options. The researcher may focus on important processes, key issues, or particular concepts (Patton, 2002). The researcher may also concentrate on the narrative, or story, of events (Patton, 2002). No one single story for the development and implementation of the Information Fluency Initiative reflects the complexity of the process. Instead, there were individual stories of participants' experiences that together produced a broad picture of how that initiative was experienced holistically and became part of the UCF undergraduate curriculum.

Processes for Data Analysis

Narratives, or the reporting of events, may be "critical to the understanding of the particular case" (Stake, 1995, p. 44). Narratives also help the researcher to gain an "experiential understanding of the case" (Stake, 2001, p. 40). Because participants in the Information Fluency Initiative had been involved in a complex undertaking, the narratives of their experiences provided insight into the processes used to develop the program. The qualitative researcher relies upon stories to understand participants' unique experiences (Denzon & Lincoln, 2005; Merriam, 2001). Study of participants' narratives, in fact, helped to explain each individual's

contribution to and understanding of the initiative. First person narratives often combine the “personal with the professional” (Tierney & Lincoln, 1997, p. viii). Participants’ stories of their experiences did, in fact, provide insight into their unique understanding of how the process of developing the information fluency initiative affected them personally and professionally.

My connoisseurship as a writing teacher and review of the literature for this study established key areas that became considerations for analysis of the data. As reflected in the conceptual framework in Chapter Two, initial examination of the literature on plagiarism generated questions concerning millennial students’ understanding of source use and revealed a problem with student writing and a perceived increase in plagiarism. Additionally, faculty’s concern with plagiarism coincided with librarians’ concern with students’ lack of information literacy skills. The framework for the study reflected that two groups within institutions of higher learning were, in fact, looking at similar challenges while using different terminology. Some institutions of higher education had instituted school-wide plans that appeared to involve cross-curricular and cross-discipline cooperation between faculty and librarians. Stake’s (1995) idea of a conceptual organizer guided the construction of the ancillary research question regarding the role of collaboration between faculty and librarians involved in the University of Central Florida’s Information Literacy Program and influenced early data analysis. Because review of the literature indicated that increased participation between faculty and librarians improved students’ information literacy, I wished to understand the process that one institution of higher education used to initiate a school-wide information literacy program that relied upon cooperation between librarians and faculty.

The initial literature review regarding learning organizations and the leader’s role in those organizations led to the second ancillary question: How did implementation and planning of the

Information Fluency Initiative relate to the concept of the learning organization? This literature also informed early analysis of data. Complex organizations such as schools require the cooperation and participation of many different individuals when attempting to initiate a change in focus or thinking (Senge et al., 2000). A shared vision, a key component of the learning organization, is often the first component to be developed (Senge, 2000, p. 344). The conceptual framework for this study reflected the need for a shared vision of stakeholders in the university when implementing an information literacy program.

The roles of leaders in the learning organization are particularly important because they “are continually helping people see the big picture: how different parts of the organization interact, how different situations parallel one another because of common underlying structures” (Senge, 2000, p. 353). Initial examination of the data from interviews revealed that many of the leaders of the quality enhancement plan for UCF and later for the Information Fluency Initiative often described deliberate decisions made with the complexity of the organization in mind. These leaders used that knowledge of the organization to facilitate development of the initiative. Understanding how the components and people in the organization relate to one another allows leaders to make effective decisions. Systems theory “provides a different way of looking at problems and goals—not as isolated events but as components of larger structures” (Senge et al., 2000, p. 78). Systems theory is implemented in organizations through strategic planning and shared decision-making. In the learning organization, leaders use their knowledge of the organizational structure to encourage people to develop a shared vision and make meaningful changes through dialogue among members of the organization. Learning organization theory was appropriate for understanding how the information fluency initiative was planned and

implemented because leaders in the initiative made decisions based upon their knowledge of the systems at work in the university.

In addition to relying upon narrative techniques and the study of the literature to analyze the data collected regarding the initiative, I also approached the data directly to identify recurring ideas or patterns. After transcribing the interviews and studying relevant documents and field notes from observations, I searched for ideas and patterns that were repeated and that would help to explain the process used to plan and implement the initiative. Eisner's (1998) process of educational criticism also guided this search for repeated ideas and patterns in the data. Because education criticism allows the critic to rely upon her experience when analyzing and interpreting data, my connoisseurship and study of the literature informed the choices for those patterns.

Additionally, the qualitative researcher may rely upon inductive analysis to determine the interrelationships among patterns and to understand phenomena (Hatch, 2002; Fielding & Lee, 1998; Patton, 2002). The researcher should also note and modify, when needed, "the existing formulation of a supposedly universal statement" (Fielding & Lee, 1998, p. 22). Therefore, care was taken to include data from participants who did not share a particular understanding with other stakeholders. Inductive analysis requires the researcher to "purposefully seek cases that apparently do not fit the explanation as formulated" (Merriam, 2001, p. 161). The process of winnowing the data is used, then, until the researcher's explanation of a phenomenon is fully supported. Therefore, care was taken in this study to examine the data thoroughly until categories were fully supported and no data contradicted the categories or themes. In fact, search of the data that identified differences in participants' experiences or understandings offered valuable insight into the perceived success of the initiative. This search also identified the perceived impact of the initiative on individual participants.

The initial research question regarding how a university planned and implemented an information literacy program guided my examination of the data using inductive analysis. In addition, the two ancillary research questions also informed that analysis. Quite naturally, part of those questions became embedded in the analysis of data. However, data not easily placed into categories based on the research question and ancillary research questions were also considered as salient to understanding of the case. The qualitative researcher will be influenced by a study's questions and parameters, but will also need to be aware of any data that has "substantive significance" beyond those parameters (Patton, 2000, p. 467). Participants in this case study, for instance, often noted that the process of planning, developing, and implementing the Information Fluency Initiative was valuable. That value, however, was not always linked to the specific research questions surrounding students' understanding of research. For instance, participants also described experiencing personal and professional growth in unexpected areas. English teachers noted their greater understanding of assessments and program evaluation. Similarly, librarians noted greater understanding of curriculum needs of faculty. Other participants noted a growth in their abilities to communicate with participants from varying disciplines. The process, then, of working together proved valuable in itself and resulted in a sense of community within those involved in the initiative.

After patterns and categories were established, educational criticism and inductive analysis then informed the analysis of the data. Initial document analysis provided data that explained the decision made by UCF to choose information fluency—a combination of information literacy, critical thinking, and computer literacy—for the topic of the quality enhancement plan. Analysis of the interview data also suggested that leaders of the institution used a thoughtful approach in determining this topic and in developing the initiative. Deliberate

decision-making on the part of the leaders in the initiative demonstrated their understanding of the university's culture and also guided the implementation of the program.

The several processes for data analysis in this case study are represented in Figure 2 to depict both the sequence followed and how those processes overlapped to make meaning regarding the complex development and implementation of this information literacy initiative.

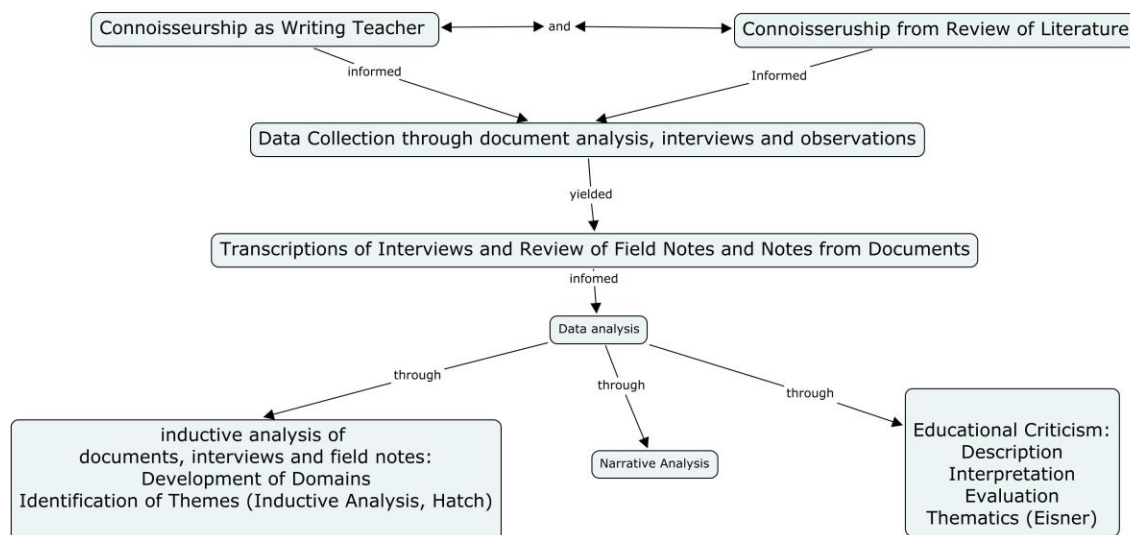


Figure 2: My connoisseurship as a writing teacher and connoisseurship from the review of literature informed data collection. Transcriptions of interviews and review of the field notes and notes from documents yielded deep and descriptive data. Analysis of that data was then informed by inductive analysis, educational criticism and narrative analysis.

The qualitative researcher makes sense and meaning from data to further understanding (Eisner, 1998; Patton, 2002). Because qualitative inquiry often yields a great amount of data, the researcher must make decisions and condense the raw data so that it is “organized, classified, and edited into a manageable and accessible file” (Patton, 2002, p. 450). This reduction in data must be sufficient for understanding and yet free of unnecessary description (Patton, 2002). Two methods helped in the reduction of data for this study. Initial reading of the documents, interviews, and observation notes, informed by the research question, was done to look for repetitive ideas and patterns. Preliminary categories—entitled Planning, Development, and

Implementation—including those data related to the specific time line for UCF's information literacy initiative. Matrices were developed in which data from the interviews and documents were placed into the appropriate periods. Figure 3 represents the timeline of the initiative:



Figure 3: This figure represents the importance of the time line to the initiative. Initial examination of the data showed that the sequence and timing of certain decisions determined the effectiveness of the initiative (Killingsworth, Martin, Montgomery, & Viggiano, 2007).

Further data analysis produced domains entitled Digital Natives and Research, Collaboration, Changes Needed, Decisions Made, QEP Expectations, Shared Vision, Successes, What Participants Learned, and Value. Such classification of the data enabled organization of the data into a framework for interpretation beyond description (Hatch, 2002; Patton, 2002). To facilitate those interpretations, matrices were created so that the data could be placed in appropriate domains. Additionally, as data were analyzed, I used a reflective process and reread transcripts of interviews and documents when necessary to further understanding of the processes used to develop the initiative.

After establishing the domains, I then used memo-writing to clarify my own nascent understanding of the data and to search for relationships among the categories. The decision to write analytic memos reflected the recommendation in qualitative literature that such writing can clarify relationships and generate insights (Hatch, 2002; Marshall & Rossman, 2006). To clarify relationships, I wrote three memos that eventually reflected the three themes determined through data analysis. One memo, entitled “Millennials and Research,” explored the relationship between millennials’ experience with the Internet, faculty’s expectations for academic writing,

and the effectiveness of collaborations between librarians and teaching faculty to construct information literacy curriculum. The second memo entitled “Decision-making,” explored the impact of administrative decisions on the success of the initiative. The third memo, entitled “Professional Learning Communities,” explored the relationships and collaborations among participants. From these memos, I gained a better understanding of the relationships among the nine domains and identified the study’s focus on planning, development, and implementation.

Educational criticism, as one of the data analysis processes, informed the search for understanding how UCF planned, developed, and implemented their Information Fluency Initiative. By making public what the connoisseur or knowledgeable professional perceives in the data, the educational critic relies upon “four dimensions: description, interpretation, evaluation, and thematics” (Eisner, 1998, p. 88) to organize her criticism. In qualitative research, description provides the foundation for understanding what has been studied. Description is not only an explanation but also “epistemic” for the researcher (Eisner, 1998, p. 89). Therefore, in the section of this chapter entitled Planning, Development, and Implementation, I sought to describe the building of the information fluency initiative so that readers might understand how the program was built. Stake (1995) specified that “the role of interpreter, and gatherer of interpretations, is central” (p. 99) to the constructing of a case study. Therefore, interpretation for the educational critic means making sense of the descriptions and giving meaning to the story. For this, the educational critic relies upon theory to inform and illuminate findings. Theory, when used by the educational critic, is a “tool for purposes of explanation” (Eisner, 1996, p. 95). Interpretations of the data gathered in the present study have been informed by my connoisseurship as a teacher and my study of the problem surrounding millennials’ academic

writing abilities. Those interpretations have also been informed by Senge's (1990) Learning Organizational Theory.

Senge described the learning process as one that “occurs over time whereby people's beliefs, ways of seeing the world, and ultimately their skills and capabilities change” (as cited in O'Neil, 1995, p, 23). Additionally, the leader in the learning organization supports the efforts of individuals and teams to solve complex problems (Senge, 1990). Thus, Senge's theory provided valuable insight to understanding the complex process through which university leadership supported participants' efforts to change their approach to teaching information fluency to students. Interpretation of the data seemed natural to the process of description so interpretation was used also in the Planning, Development, and Implementation section of this chapter to inform the analysis.

Evaluation, the responsibility of the researcher to acknowledge how the focus of the research addresses important values, serves as the third dimension of educational criticism (Eisner, 1998). The Evaluation section of this chapter explores the value of UCF's Information Fluency Initiative to participants personally, the university culture, and to the broader higher education community. Finally, the identification of themes—the fourth dimension of educational criticism— “means identifying the recurring messages that pervade the situation about which the critic writes” (Eisner, 1998, p. 104). Those themes allow the researcher to explicate essential qualities of a particular case. Three themes, or messages, were identified in the data as important to the heuristic understanding of UCF's Information Fluency Initiative and are discussed in the Thematics section of this chapter:

1. Thoughtful decisions in the process of the initiative acknowledged the culture of the institution.

2. The initiative led to an increased library presence in the university community.
3. The process itself was valuable and resulted in personal growth for participants, ultimately creating a community of learners.

In summary, my connoisseurship as a writing teacher and from the review of literature informed the establishment of patterns and categories in the data. Through inductive analysis, domains of particular importance were identified. Additionally, educational criticism was used to develop a heuristic understanding of the case. From this analysis, a narrative developed that portrayed the unique experiences of those who developed UCF's Information Fluency Initiative.

The Story of Planning, Developing and Implementing the Initiative

Analysis of documents, interview data, and observational field notes engendered a broad, holistic understanding of how the leaders in the university planned and developed the initiative. Analysis also produced understanding of how the program participants implemented this program.

This narrative is organized into three sub-sections designated Planning, Development, and Implementation which reflect the processes used for the implementation of UCF's Information Fluency Initiative. A second section in this chapter, Evaluation, analyzes the value of the initiative for the university and for the participants of the initiative. A final section, termed Thematics, identifies insights gathered through the analysis of data. Throughout this chapter, Eisner's (1998) elements of description and interpretation inform the analysis of data.

As I analyzed the data, with the research question in mind, the importance of the step-by-step method by which the information fluency initiative was designed became apparent. Careful decision making by leaders at each step led to subsequent steps. Inductive analysis, in fact, assumes that a stepwise examination of data will lead to clarification of general statements (Fielding & Lee, 1998). Thus, because the planning process was deliberate and connected, a

narrative detailing decisions and actions in the planning and implementation process was appropriate.

Describing events without interpretation would not yield understanding of the initiative.

Polkinghorne (1997) suggested that:

Narrative transforms a mere succession of actions and events to a coherent whole in which these happenings gain meaning as contributors to a common purpose. The research narrative draws together into a story the diverse actions and events that contributed to the research outcome –the findings. (p. 13)

Because the events of the Information Fluency Initiative appeared as a succession of actions designed to contribute to the successful implementation of the initiative, interpretation of those events contributed to the heuristic understanding, or meaning, of those events. The identification of domains through inductive analysis led to an explication of the events surrounding the planning, development, and implementation of the Information Fluency Initiative. Additionally, the identification of themes as strands that appeared through the process of developing the initiative yielded a heuristic understanding of those events.

Planning the Information Fluency Initiative

In 2004, UCF was tasked by the Southern Association of Colleges and Schools to create a five-year plan for improvement at the university. Labeled the Quality Enhancement Plan, this requirement for accreditation was new and something the university had not participated in previously. The Quality Enhancement Plan requires that institutions of higher learning use assessment to identify central issues of concern, choose one of those issues that is key to student learning, and prove that the school has the resources to support the plan developed to improve that issue. The institution must also assure broad-based involvement of all constituencies in the university when choosing the issue and must demonstrate that the institution has developed clear goals and methods of assessment for their plan (Southern Association of Colleges and Schools

Commission on Colleges [SACS], 2011). In fact, the QEP requires a systems-wide approach to reaccreditation that involves key stakeholders across the university to develop a shared vision and use school resources to effect change (Jackson, Davis, & Jackson, 2010).

In the interviews participants described how they interpreted these requirements.

Participant A described these expectations:

They wanted broad based participation in the selection of the topic, and they wanted a significant financial commitment, and they wanted to be sure that student learning outcomes would be a prominent piece and that it had to be something that was significant.

Participant A's statement reflected her salient understanding of SACS requirements. This statement also reflected her understanding of the specificity of those requirements and the need for the university to meet these expectations.

Participant A also recognized that the newness of the QEP requirement presented some challenges.

Some of the things that changed and floated and confused the process are that ...there was a lot of back and forth about how much work you had to have behind you on the initiative to show that there was a possibility of creating it and sustaining it but not so much that it looked like the institution could have done it without creating a QEP for SACS. It was real tricky and very frustrating. You get different answers from different staffers. So I think that was one of the greater external challenges for school leaders.

Few guidelines were available, and, in fact, the process was a shifting and unclear one.

Participant A's reference to "external challenges for school leaders" reflected a principle of the learning organization—that leaders help clarify reality for their employees (Senge, 1990). In other words, the leaders focus on helping others see the "big picture" (Senge, 1990, p. 353).

Additionally, systems thinking recognizes that organizations are complex and elements are often interrelated (Senge, 1990; Senge et al., 2000). As Participant A noted, school leaders of the accreditation team were particularly aware of the need to clarify the QEP requirements early in

the process because the requirements required broad-based cooperation from many programs in the university. Cooperation across disciplines, however, may often be challenging (Friend & Cook, 2007; Montiel-Overall, 2005). The administrators' understandings of the complexity involved when getting this broad-based cooperation informed many of the initial decisions in planning and developing the initiative.

In a similar vein, Participant D described her own understanding of the QEP requirements:

So, the standard says that you have to have a broad based process that generates the topic and broad based involvement in the development of the plan. The standard says that you have to have a plan for assessing the outcomes ... and it also says that you have to have a topic that is related to student learning or the environment in which learning occurs. ... They're looking at the process and whether you have a plan in place, whatever the topic is, so they're looking at, not from the topic perspective but whether or not it meets these five areas requirements.

Participant D's reflections echoed Participant A's interpretation of the QEP requirements and the emphasis placed on the process used to develop the plan. Both participants understood that the QEP initiative required participation across disciplines, clear learning outcomes that were related to student learning, and a process for evaluation. Because the QEP was relatively new, UCF's leadership faced the challenge of developing a plan that met loose and sometimes changing requirements. Although the process was unclear and shifting, the leaders of the accreditation team seemed to have successfully interpreted the requirements of the new process.

To comply with SACS' broad-based requirement, university leadership appointed members from "faculty, academic area administrators, student services, administrative support services, students, staff, and alumni" to a university quality enhancement planning committee (University of Central Florida [UCF], 2006, p. 5). This broad-based committee was charged with determining the focus of the QEP. Participant D confirmed the institution's commitment to broad-based involvement:

Yes, there were faculty on both [the compliance certification team and quality enhancement program team], and there were administrators on both. And, the QEP had student involvement as well. So it was, you know, a very broad group of individuals from all areas, all colleges. And that was a very large and inclusive group, and he would basically convene that group twice a week. Because of people's schedules he basically had the same topic covered two times during the week so that different people could come at different times.

Participant D reflected the QEP committee's deliberate decisions when constructing the quality enhancement plan to include stakeholders from the entire university community. Creating a vision for an organization depends upon developing a shared understanding of the mission of an organization (Senge, 1990). Designers of the QEP requirement thus reflected the impact of systems thinking upon SACS requirements for reaccreditation (Jackson, Davis, & Jackson, 2010). The QEP relies upon institutional use of sources to identify a need for student learning and brings together "different academic groups and resources into what are often described as interdisciplinary settings to effect curricular improvements that promote learning (Jackson, Davis, & Jackson, 2010, p. 16). Data from interviews confirmed that leaders at UCF carefully constructed the QEP to encourage interdisciplinary collaboration to effect changes to instruct students in information fluency. Leadership's dedication to broad-based participation was also reflected in the decision to hold two meetings for each topic, recognizing the difficulties involved when scheduling meetings in the complex and large university in which schedules vary.

With representatives from diverse areas of the college community, the QEP committee then worked to develop a topic for the QEP. This topic, the committee knew, would need to meet the SACS requirement for a key issue that would impact student learning. The team used several approaches to develop their topic for the QEP. First, they looked at existing structures such as the school's strategic plan, other institutions' QEP plans, and their own institutional plans for assessment. The team also analyzed data from the 2004 National Survey of Student

Engagement (NSSE) and the Faculty Survey of Student Engagement (FSSE) and results from UCF's graduating senior surveys to determine broad areas, or themes, worthy of a QEP focus (UCF, 2006, p.5).

In planning for UCF's Information Fluency Initiative, leaders relied heavily upon data from research to inform the direction of the program. For instance, planners for the initiative noted in their narrative that although only 10% of UCF's students used the physical library to access materials and 6 percent used remote access of library materials, 69% of UCF's students used non-library sources, most particularly from the Internet (UCF, 2006, p. 21). These data correlated with studies that suggested that today's college students preferred the easy access of Google and other Internet sources to the more rigorous and time-consuming library databases (Davis, 2002; Owunwanne et al., 2010; McClure & Clink, 2009; Neely, 2002). Additionally, in a 2006 survey, UCF faculty perceived that "many or most of their students lack the skills necessary to achieve information fluency" (UCF, 2006, p.21). Interestingly, UCF students themselves, when participating in focus groups, suggested that they needed "increased intellectual capability in communications and critical thinking" (UCF, 2006, p. 23). Focus groups of employers also suggested that students needed to improve their overall knowledge and communication abilities (UCF, 2006). However, in a 2005 survey, 92% of graduating UCF students believed that they were leaving the university with the ability to "think logically and resolve problems," a sharp contrast to the 15 percent of faculty who agreed with that statement (p. 25). This difference in student and faculty perceptions of skills reflects Neely's (2002) findings that students do not always have a realistic understanding of their own research abilities.

Participant E described the process used to gather and assess the data for determining the focus of the initiative:

You looked at institutional information. . . . Early on we ended up going to everybody that would listen to us and tell us, so we would talk about the QEP, what it was, what the expectations were. We had a lot of different focus groups; we got an idea ...we ended up sending just a general survey idea, asking for ideas. We had the president send out ..., an email saying please tell us what you think. We had an online suggestion box for ideas and that's, to try and get people to at least invest in something. And, we got some fairly good responses to it and then ... we ended, up with eight themes.

Those eight themes were then publicized to the university community at large to determine the amount of interest in each. Participant E explains the process:

We asked people to submit three page proposals for what they might want to see as a QEP. . . . The library submitted one that was engaged, involved with information literacy at the time.

This process, as described by Participant E, recognized the need to focus and clarify the eight broad themes identified as important to the stakeholders of the university. After the themes were identified, members of the university were asked to submit two-page pre-proposals for possible QEP topics. From the 14 pre-proposals, 8 were chosen to be developed into more developed white papers. The process of developing the eight papers was “not to have the authors develop full plans, but rather to conduct a good analysis of the various issues, identify potential student learning outcomes that included methods of assessment, and the availability of resources to carry out the plan” (UCF, 2006, p. 8).

Recognition of the changing culture of research led the librarians at UCF to propose the development of a university-wide program to improve students' information fluency. Although the original white paper was labeled information literacy, the librarian team working on the white paper broadened the topic to the concept of information fluency, a combination of information literacy, critical thinking, and computer literacy. Information fluency was a relatively new term, reflecting a broadening of the term information literacy to incorporate students' abilities to fluently apply their skills (Stripling, 2007). The Associated Colleges of the

South defined information fluency in 2003 as the confluence of information literacy, computer literacy, and critical thinking skills (Beile, 2007). Not only, then, did the librarians' white paper reflect their interest in information literacy, but it also reflected the other issues of communications fluency and critical thinking proposed by others in the university during the process of seeking ideas for the QEP.

Participant M explained the importance of this shift from information literacy:

You'll notice the plan we did was not called information literacy. ... There are places like the philosophy department who heard critical thinking and that was like throwing red meat [as an enticement] and then we are the library's part of Information Technology and Resources. ... That's our division at the university. ... We report to the vice provost of information technology. ... He is all about technology ... and so sometimes he'll encourage us to do more with technology so this whole thing with the technology competency was like throwing red meat at another quarter.

The confluence of the topics, then, reflected librarians' awareness that a broad-based initiative including several of the themes would be a more likely choice for a university-wide plan.

Participant M and others involved in writing the information fluency white paper also reflected an understanding of the university culture – one in which disciplines may understand or define concepts such as information fluency from their own unique perspectives. For leaders in the learning organization this understanding is particularly important, for “Leaders are continually helping people see the big picture: how different parts of the organization interact, how different situations parallel one another because of common underlying structures” (Senge, 1990, p. 353). Thus, the librarians' white paper reflected their understanding of the different perspectives involved when viewing problems related to students' academic writing.

After submission of the white papers, the QEP planning team chose four proposals from teaching faculty and librarians who developed expanded papers. These included a proposal to improve students' communication, critical thinking, and numeracy abilities; a proposal for

including information fluency in cross-discipline curriculum; a proposal for fostering global awareness in students; and a proposal to integrate research throughout the curriculum (UCF, 2006). During the review of the final four proposals, the UCF SACS Leadership team, led by Dr. John Hitt, president of UCF, focused on choosing a topic that would “make a substantial difference with UCF students and be realistically achievable” (UCF, 2006, p. 8). The leadership team selected the topic of information fluency for the Quality Enhancement Plan because they determined that the topic was an “essential area that requires sustained academic attention” (UCF, 2006, p. 8). The leadership team also noted that the topic included critical thinking and communication which had been the two topics most noted in the original survey to identify concerns, or themes, in the university community.

The importance of the librarians’ decision to incorporate information literacy, critical thinking, and computer literacy was confirmed by Participant A: “But they basically took the information fluency because ... it was more technology oriented; that’s more sort of a spirit of UCF.” Participant M noted that the proposal’s inclusion of critical thinking and technology were important in its eventual acceptance as the QEP focus. Additionally, Participant A identified the particular importance of technology in UCF’s overall mission. Initially founded as Florida Technological University in 1963 (University of Central Florida [UCF], 2012b), UCF’s interest in technology and innovation was often noted by participants.

Two key concepts, as seen by the above excerpts, appeared early on in the data. One of those is support; as reflected in the literature, support is necessary when implementing initiatives requiring collaborations across disciplines (Friend & Cook, 2007; Senge et al., 2008). Participant M understood, along with the librarians, that to be broad-based, an initiative in a university had to garner buy-in from different departments. Combining critical thinking and

computer literacy with information literacy broadened the scope of the proposal to focus on information fluency in order to encourage support from other participants in the university community. Participant M noted the enthusiasm for the initiative from the philosophy department and the information technology department. The inclusion of critical thinking in the QEP also reflected the librarians' awareness that the less inclusive concept of information literacy is many times considered the domain of the librarians. In fact, in several studies faculty were more likely to refer to critical thinking and to resist the active role of librarians in teaching their version of information literacy (Macdonald, 2008; McGuinness, 2006; Rollins et al., 2009).

The need for administrative support also became apparent in the data. Participants – both administrative and faculty – noted that administrative support was necessary for a university-wide program. Participant A noted the importance of administrative support:

So he [the president] did that throughout the selection of the QEP. He helped select it. He heard all the proposals. When we did progress reports he was there. And that helped lend credibility ... and it also makes sure that your president is up on where you are headed.

Here Participant A reflected the notion that leadership support provided value to the initiative for others in the university. Effective leaders help articulate an organization's vision and commit to that vision (Bolman & Deal, 2008). Because the president of UCF, John Hitt, had a visible presence in the initiative, participants often noted that they felt their participation was valued by the university.

Development of the Information Fluency Initiative

Once the topic had been determined, the QEP committee that had been responsible for choosing the plan's topic decided that a director was needed for the Information Fluency Initiative. Although the initiative was proposed by university librarians, faculty members were

chosen as co-directors. I asked Participant E if the decision to name faculty members was deliberate:

Yes. Yes, it was. We believed that we really needed to have a faculty member to lead this whole effort. It would have more credibility with faculty. . . . What we really wanted to have a visible faculty member as heading that thing off. Otherwise it's oh, here comes the library again trying to get us to do something, without really fully appreciating the value that they can bring to this in terms of doing it. But we ended having more people than just the library involved in this. So it was a very, very broad-based effort in terms of its actual implementation as well.

The decision to ask faculty to lead the initiative once again reflected leadership's understanding of the university's culture. Leaders of the QEP planning committee concluded that having librarians owning the initiative would restrict or dissuade participation from faculty. This concern is supported through the literature that suggests faculty most often see information literacy as a library function (Albitz, 2007). The decision to appoint faculty as co-leaders of the initiative appeared often in the data as important to the success of the program because it recognized that faculty would play a key role in implementation of the information fluency initiative.

The two faculty members, as leaders of the new Information Fluency Initiative, next issued a university-wide call for participation in a proposed QEP development team. This team would identify the QEP focus, develop plans for initiating the initiative, and develop methods to assess the plan's effectiveness. The QEP development team leaders would also continue communications with the QEP administrator. The team that was assembled included "faculty members, library faculty, administrators, student support professionals, and student, staff, and alumni representatives" (UCF, 2006, p. 27). This team met frequently during the spring and summer of 2005 to develop a clear definition of information fluency and to determine the focus for the initiative. Additionally, the information fluency development team conducted seven

focus groups with students to determine student information fluency needs. They also consulted with national leaders in the field of information literacy (UCF, 2006). Focus groups of faculty members and business leaders were also asked to inform the initiative's focus and structure. Academic and library faculty also participated in an information fluency strand during UCF's 2005 regularly held Summer and Fall Faculty Development Conferences to discuss the implementation of the plan. These activities led to an operational definition of the term information fluency based upon the Associated Colleges of the South's explanation and to preliminary plans for achieving the goals of the initiative (Beile, 2007). The university QEP's committee defined information fluency as

Information fluency is the ability to think critically in an information-rich and technology-intensive environment. Information fluent individuals know how information is organized, know how to find information, evaluate information, and use information in a way that is useful to others' learning. Ultimately, the information fluent individual has learned how to learn. These individuals can learn because they can reflect upon and critique their processes of inquiry. (UCF, 2006, p. 28)

The deliberative nature of the process in terms of information sharing, recruiting faculty and providing opportunities for feedback once again illustrated the commitment of the university and its leaders to the initiative's success.

According to the participants, the Information Fluency Initiative generated interest throughout the university; however, as the Information Fluency development team moved towards defining its plan, different approaches to carry out the initiative were proposed. The effort to reach a broad-based participation in the initiative opened up the possibility of having to reject otherwise good suggestions in the interest of meeting the monetary, time, and procedural limitations. Participants did, in fact, reference the need to choose the particular focus of UCF's Information Fluency Initiative given the restrictions of the QEP boundaries and timetable and UCF's own budgetary restrictions. Participants did not discuss the particulars of the proposed

plans, but noted that some decisions to narrow proposals had been necessary. Participant A reflected this need:

Our biggest problem once we selected a topic was to figure out how to limit it to and how to start. . . . We were supposed to be facilitating, and really you can't tell people what they think. You're facilitating it, so what we did was we formed that National Board that you have read about and have the names of very truly prominent people to vet the ideas.

Here Participant A narrated the decision to create an advisory board made up of experts from around the United States in the fields of information fluency and information technology to help guide the QEP planners in their decisions. Her explanation echoed other participants who noted the many people interested in participating in the information fluency initiative. The interest in the plan suggested the importance given to the concept by many in the university community. This concern with students' information fluency ability reflected issues described in much of the literature (Allen, 2007; Breivik, 2005; Chen & Williams, 2008; Egan & Katz, 2007; Floyd et al., 2008). The size of the university was also noted by Participant A and several participants as a mitigating factor in decisions. Because the university was the seventh largest public university in the United States with 45,000 students and nine academic colleges when the project was initiated, participants noted the difficulty of incorporating new ideas across the institution (UCF, 2006). Because of the broad interest in the QEP and the size of the university, members of the advisory board, well-known experts in the field of instructional technology and information literacy, were asked to vet different ideas for the initiative and determine the final direction for the initiative.

Participant A noted the importance of the board's advice:

We got the top people and people who could tell us what's already been done, what's in the hopper and . . . you know there are people that know what's going on nationally. They know who's doing projects on what so they knew what was coming down the pipe . . . so we had each group [from UCF] present their ideas and their concepts of how

we would go about this umbrella idea. . . . Different groups developed different ideas of how to go about this. And we formed a board to vet it who had no skin in the game. It was very effective and then they ended up by advising us along the way. . . . You know it's been really valuable.

In describing the role of the advisory board, Participant A reflected the need to focus and narrow the QEP development team's approach to fit the parameters of the project. Participant A also recognized the importance of acknowledging all stakeholders' input. Different groups in the university had their own vision, or mental model, of the QEP plan's focus and structure. Leaders recognized that given the parameters of the QEP, some consensus or compromise was needed. Appointment of the national board of unbiased participants helped to bring about the needed atmosphere for these discussions. Because participants' mental models may differ in a complex organization, leaders need to bring "tacit assumptions and attitudes to the surface so people can explore and talk about their differences and misunderstandings with minimal defensiveness" (Senge et al., 2000, p. 67). This use of a national board and other decisions made by leaders in the QEP process reflected another tenet of the learning organization—that leaders serve as facilitators for learning and change rather than dictating change. The leader, in other words, is "designing the learning processes whereby people throughout the organization can deal productively with the critical issues they face, and develop their mastery in the learning disciplines" (Senge, 1990, p. 345). Stakeholders who come to a consensus on the fundamental vision for any organizational change may, in fact, be more effective (Senge, 1990). Leaders of the QEP development team recognized this need for consensus when they organized the outside advisory board to vet ideas for the initiative.

Based upon the data from student, faculty, and alumni focus groups and outcomes from the information fluency strands in the regularly held 2005 summer and fall faculty development conferences, the development team identified three categories for the Information Fluency

Initiative: “environment, enhancement, and engagement” (UCF, 2006, p. 37). Environmental issues referred to the development of awareness of information fluency throughout the environment of the university. The activities in this portion of the initiative involved developing an increased awareness of information fluency in the college community through faculty fellows, strands in the regularly held fall and summer UCF faculty development conferences, and an increase in online instruction and resources for faculty development. The second category, enhancement, referred to enhancing learning through technological and personal initiatives. These activities included the building of online information literacy modules to be used by faculty and students, selecting information fluency student scholars, building technology literacy learning modules, and extending UCF’s Writing Center’s online peer-consultants. Finally, engagement initiatives focused on engaging faculty in curricular changes at the program and individual course levels. The program level changes were conceived as multi-year, broad-based curriculum changes initially involving the Philosophy, Nursing, Honors, and Strategies for Success programs. The Information Fluency Office would also award 10 individual grants in the amount of \$1,000 each year to support the development of information fluency strategies by individual faculty members or small teams of faculty.

Having established a focus and plan for the initiative, the QEP development team designed activities to create awareness of information fluency in the university as a whole with the objective of broad-based involvement. Participant E described the efforts used to involve the community of the university: “We had a very, very broad marketing campaign just before the on-site visit [by SACS].” The campaign included banners, advertisements in the student newspaper and on Facebook. The development team also used mugs and pens as marketing devices for the initiative. Participant E’s explanation demonstrated the deliberative, thoughtful approach used

throughout the QEP process. The development team understood the need for broad-based commitment for their initiative and understood that the size of the university necessitated a large-scale approach to advertising the initiative. They also demonstrated an understanding of the university students' culture by using the Internet and, in particular, Facebook in its early stages, to communicate with UCF students.

Initially, planners of the QEP were concerned that they would not generate interest in the QEP. However, this was not the case. In fact, a demonstration of the perceived importance of the topic can be seen in Participant J's first reactions to the information fluency advertisements:

I remember the orange flags that had IF [Information Fluency] written on them and . . . I thought how could I not know what IF means? . . . It was about two weeks or so until all of a sudden we saw I saw something on line about the president or provost's new initiative for information fluency. . . . it's like this is the problem we've been talking about we knew it was an issue, but it wasn't something I probably would've tackled without somebody handing me something like a grant and a little bit of a kick in the butt of incentive.

Participant J reported that she was so excited when she first heard about the campaign, she ran to a colleague immediately, and they began planning how they could use the initiative in their courses. Participant J's recognition that information fluency was the problem that she and her colleague had been discussing also reflected the material from the literature review. Studies often indicated that faculty were concerned with students' inability to use and critically evaluate sources (Burkhardt, 2007; Howard, 2000; Neely, 2002; Walker, 2008). Faculty also, however, did not identify the problem as lack of information literacy or fluency (Macdonald, 2008; McGuinness, 2006; Moore & Ivory, 2000). Like many faculty, Participant J recognized that her students had problems when writing from sources, but she had not identified the problem as lacking information fluency. When information fluency was defined as the initiative, she recognized its significance for improving her students' writing abilities.

While the development team was promoting the information fluency initiative, they also confronted the need to identify the first year's participants in piloting the initiative. Participant E reflected upon decisions made in this process.

And then as we selected a topic . . . we tried to look at people that were heavily involved in the scholarship of teaching and learning because we thought those would be, from a research perspective, there would be these people might really be interested in this and want to play in the game and ultimately what we got engagement of is another question in terms of awareness.

Participant E noted the deliberative focus of the Information Fluency development team. UCF's Quality Enhancement plan was conceived as a pilot program that would lay the foundation for a culture of information fluency at the university. Because the program was limited in scope and always considered a pilot, the development team deliberately sought to identify participants who were interested in this topic and who had expertise in the scholarship of teaching and learning (Boyer, 1990), something encouraged by the university (UCF, 2006).

The final plan to implement UCF's Information Fluency Initiative was informed by the research data as well as input from the National Advisory Board, and the QEP development team. Thoughtful decisions guided the process with the goal of broad-based participation, institutional support, and measurable outcomes as directed by the QEP standards. Interview participants especially noted the effectiveness of the information literacy learning modules, projects to infuse information fluency into the curricula of four university programs through multi-year projects, and curriculum projects focused on individual courses.

Implementation the Information Fluency Initiative

Upon SACS' acceptance of information fluency as the university's quality enhancement plan, a management structure for the implementation of the initiative was put in place. The Information Fluency Office was created first, co-directed by the two faculty members from the

development team, Dr. Martha Marinara and Dr. Chuck Dziuban. In year three of the initiative, a full-time coordinator, Mr. Hank Lewis, joined the office to manage the assessment reports. A graduate research assistant also supported the office each year (Information Fluency Office, 2012). In addition to the managerial structure, a QEP Information Fluency Initiatives Council consisting of members of the university community was instituted to vet new projects and provide a continued focus for the QEP initiative (Information Fluency Office, 2012).

As the plan progressed to the implementation stage, leaders in the Information Fluency Initiative discussed the need for financial and administrative support. Faculty and administrators described monetary grants available for large, departmental plans and smaller monetary grants for individuals or small groups of collaborators. Participant J noted the importance of the \$1,000 incentives for the smaller grants:

I might have used it for travel or to buy a new computer or something like that. ... I've learned that I am a very incentive driven person ... but it [the initiative] was also an incentive that was for the common good. It was something the university cared about, and I respect that. ...this is something they like; this is something I am interested in, and let's if we can make it happen.

Participant J noted that although there was a monetary incentive for participation in the initiative, she hoped that her project benefited students and the university. The importance of the monetary support led to a second concept of support—recognition of value to the university. Participants, especially faculty, often noted the importance of seeing value in an activity broadly and not merely as a response to an incentive.

Participant C noted the value of administrative support when she described her reaction to the president's support for the initiative in statements and through his participation in the QEP planning meetings: endorsement

It was from the big man, the president. And so he said this is important; this is what's going to be chosen, and I think that made a huge difference, not only in, just, support

from people or the library, but monetarily. There was money behind it. Money helped with shared vision.

Participants often cited this type of support as important to the initiative's success. In particular, participants noted President Hitt's involvement in the process as important, as reflected in Participant C's remarks. This sense of value came from the perception that the activity with which they were engaged was important to the university.

In fact, the importance of the university's value for the initiative noted by this participant was often cited in the data. Administrators of the initiative understood the need for university support, and faculty noted the importance of that support in their decisions to participate in the initiative. Participant J also reflected upon the confluence of the university's interests and her own. Often when reflecting upon the value of the initiative, participants described a personal interest in the topic of information fluency and reflected upon the value of their particular projects to their classrooms.

Participants J and C recognized, then, that support, both monetary and administrative, proved important to the initiative's success. Furthermore, that support underscored the value of the initiative for both individuals and the institution.

Information Literacy Modules. Although the QEP was a multi-faceted program involving four large university departments and many small grants for faculty, one important and successful part of the program was the library modules developed by university librarians with the input of faculty. These modules focused on information literacy as part of the larger information fluency initiative. Participant C described the creation of these modules:

Once the QEP was chosen, and our department was created . . . added to that was . . . the project to create an on-line tool, on line modules and we were tasked to either find them, obtain them, or create them. And, uh, we ended up creating fourteen, right now fourteen information literacy modules in an online, home grown learning object system that you may have already heard about.

Participant C here first referred to the creation of an Information Literacy and Outreach Department. The creation of this position reflected again the value of the initiative to the university. Participant C also explained that these modules were learning objects developed by the librarians with the collaboration of faculty and personnel from the Center for Distributed Learning, the department that oversees UCF's online courses. These modules are interactive, containing self-check practice quizzes that students may use to determine their own knowledge.

Participants M and D noted the success of the modules. In particular, their excerpts highlighted the co-curricular development between the librarians, participants from the Center for Distributed Learning, and teaching faculty.

Participant M:

I think the most successful part of it [the Information Fluency Initiative] is the information literacy modules that the library writes and in conjunction with the center for distributed learning puts them up on a platform unfortunately named Obojobo.

Participant D:

They have, uh, developed some self-learning modules . . . which have been very useful for various folks to use because they're reusable, and anybody can get to them. . . . I think they've done a good job in terms of integrating information fluency throughout the institution.

Both participants identified the information literacy modules as successful components of the Information Fluency Initiative. This success was attributed in part to the interdepartmental cooperation and integration of information fluency curriculum throughout the university, a type of integrated curriculum that is described in the literature as particularly successful (Montiel-
overall, 2005). In particular, Obojobo, a learning object system that was developed by the Center for Distributed Learning, proved crucial to the success of the modules because it provided the interaction both librarians and faculty wanted students to experience. In addition, Participant

D emphasized the self-directed properties of the modules that enabled students to read the modules independently and take practice quizzes before taking graded assessments.

Although students may read the modules independently, instructors most often assign particular modules either as part of their courses or on an as-needed basis for underprepared students. Participant J explained how she used the modules:

I love the fact that the library has made a bazillion modules; that now it's pretty simple that if you find somebody who is not fluent, you can say o.k., you need to do this this and this. And they've gotten better over time.

Participant J, then, used the modules as remediation tools for students who lacked information literacy skills needed in her course. Although the students completed the work independently, that work's completion was linked to the particular course for which it was assigned.

In fact, the librarians worked closely with faculty in some disciplines to create discipline-specific modules, as discussed by Participant K: "There are library modules that contain information fluency specific to nursing—at least two that I know of." The information literacy modules, then, allow instructors to individualize information literacy instruction in their courses. The scores for the modules can then be accessed by instructors. Instructors may also determine the time each student spent reading the material as well as the time taken for each assessment. This type of instruction allows students to master particular skills needed for particular courses. In this way, students with weaker skills may successfully complete courses which they otherwise might fail.

Participant F described another way in which faculty have integrated the modules into their curricula:

I use several of them in there [a research-based class]. Evaluating sources, developing research strategies, couple of different ones ,oh using Google scholar and a couple of different ones because I want students to learn to use Google scholar in addition to the library site, and we have a Google scholar link attached to our library site.

Participant F further explained that she uses the information literacy modules as gateways to her course. Knowing the skills her students needed, Participant F assigned applicable modules and made completion of those modules necessary in order to gain entrance to the online portion of her course. These information literacy modules proved to be an essential piece of the information fluency initiative that provided the opportunity for interaction between diverse departments in the university and assured the broad-based participation expected by SACS.

Although there are 14 information literacy modules, the first, most requested, and most used module concerns plagiarism. Participants C and M noted the faculty's request for the inclusion of plagiarism as a topic for the modules:

Participant C:

We started with what the faculty wanted, and so that ended up being plagiarism, and, uh, citing sources, evaluating websites. Those are the big things that kept coming up.

Participant M also discussed the importance of the modules, making a connection between the information literacy standards of the Association of College Research Librarians and teaching students to avoid plagiarism:

I think that was a pretty good move when our process was being implemented, and they looked at what module should be written first. They went to the ACRL [Association of College Research Librarians] outcomes and standards and then asked faculty members about it, and I believe plagiarism was in the first group of four that was produced.

Here Participant M referenced the ACRL's information literacy standards; the standards that informed the library's creation of the information literacy modules. Both Participants C and M reflected the intersection here of the librarians' definition of information literacy and the teaching faculty's definition of plagiarism. The difference in terminology was often reflected in the literature (Albitz, 2007; Floyd et al., 2008; Guiney & Wilkes, 2008; Howard & Davies, 2009; Neely, 2002). However, when faculty and librarians have collaborated, they have discovered

that the two skills intersect and the improvement of students' information literacy leads to fewer problems with plagiarism (Jackson, 2007).

The University of Central Florida's Information Literacy Modules, in fact, demonstrated that one approach to solving the problem of plagiarism in colleges may be through explicit instruction. Participant M noted:

Has the information fluency program addressed plagiarism? Oh my gosh. Is the Pope an Argentine? Holy cow, our leading module is plagiarism, avoiding plagiarism. I don't know how many thousands have taken that. That's number one, so yes it's been addressed That I think possibly attracted faculty members to the modules.

Participant M's enthusiasm for the plagiarism modules echoed data from other participants who saw the need for and value of instruction to prevent plagiarism.

Participant N also commented on the faculty's use of the modules, especially to instruct students on avoiding plagiarism: "The library ones are very popular. I know those are being used, and I think that a lot of the faculty are embedding the plagiarism ones into their courses at the very least." Data from UCF's five-year QEP report substantiated Participant N's observation: the module for plagiarism was completed by 13,043 students between 2008 and 2011 (Information Fluency Office, 2012, p. 4). Much of the literature concerning plagiarism involved discussions of "catching and punishing" the plagiarists (McCabe & Trevino, 1993; McCabe, Trevino, & Butterfield, 2002; Melgoza & Smith, 2008). In the past, schools have often formed academic integrity policies clearly stating the results of cheating, whether that cheating involves collaboration on outside assignments, cheating on tests, or plagiarizing papers (McCabe & Trevino, 1993; Melgoza & Smith, 2008). Schools might also work to clearly define academic honesty for students. Fewer institutions, however, approached the problem of cheating from a constructivist perspective that recognizes students may not be familiar with academic integrity policies in place and that they can be helped to understand those policies. Construction of the

modules also acknowledged the importance of considering the learner in developing activities to support the learning process (Dewey, 1963). UCF's Information Fluency Initiative encouraged this type of education through a constructivist approach that used appropriate instruction and curriculum to allow students to develop and practice their skills and supported faculty in assessing those skills.

Large-scale, Multi-Year Projects within the Initiative. Another element of UCF's Information Fluency Initiative involved three-year plans for specific programs. These plans were identified as large-scale because they involved entire programs and went beyond the efforts of individual faculty members. The first set of program-based projects was undertaken by The Burnett Honors College, the College of Nursing, the Department of Philosophy, and The Freshman Seminar (Information Fluency Office, 2012). Participant B noted the deliberate choice of four university programs to pilot the information fluency initiative:

They were very excited. And again, they [the development team] very carefully hand-selected the four initial programs that they knew would be on board. The nurses are always great. They are always very responsive. It ties into evidence-based learning so they were totally on board. Honors was on board. . . .It was . . . like a big wash of change on campus.

Participant B reflected here that the Nursing and Honors Colleges were chosen to participate in large-scale programs because of their interest in the information fluency initiative. In fact, both of these colleges, Nursing and Honors, were often mentioned in interviews as successful examples of the initiative. The nursing program had been asking for help with their students' research abilities so their inclusion was a natural fit. In fact, the librarian who was the nursing program's liaison to the library initiated the original white paper for information literacy. The College of Nursing wanted to increase their students' abilities to use research to improve patient care and safety. As a result of the project, that college developed curricula that infused

information fluency into all the college's degree programs—referred to as evidence-based practice (EBP). Analysis of the Evidenced Based Practice Readiness Inventory developed at the University of Texas at San Antonio Center demonstrated improvement over time of students' evidence-based skills. The College of Nursing also used the results of the Inventory to continue changes in their curricula to further alignment with the initiative's information fluency skills (Information Fluency Office, 2012).

Participant B also noted the inclusion of the Burnett Honors College. The nature of the Honors' program students, those students who had an interest in academic excellence, was perceived as a fit for inclusion in the initiative. The Honors College eventually integrated information fluency skills into all Honors courses, thus affecting 2,460 students during the five-year reporting period for the QEP. In collaboration with the UCF library, the college also instituted Information Fluency awards for students and trained peer-consultants in information literacy skills (Information Fluency Office, 2012). The participation of both the Nursing and Honors Colleges demonstrated that the university's Information Fluency Initiative met real needs in the university, one of the requirements for the Quality Enhancement Plan and for the learning organization (Senge et al., 2008).

Participant H noted the importance of the third program, Student Development and Enrollment Services. This program participated in a large-scale project to infuse information fluency into a one-credit SLS course that originally served as an introduction to skills needed for success in college.

Because of the grant that they got from us, and the work we did with them, it [the student success course] is now a three-credit course. It is an academic course, and while it still contains those other elements, they also have a writing project they do. They do library research. So they really get an introduction to research and writing at the University. It's now called freshman seminar.

Participant H was enthusiastic about the success of the freshman seminar. This success was demonstrated in the course assessments for library fluency and writing fluency. Evaluated with pre-and post-tests developed by the SLS faculty, students' improvements in both areas were statistically significant ($p < .01$), and the SLS course has now been designated as a three-hour seminar (Information Fluency Office, 2012, p. 21). In fact, one of the perceived negatives for the Freshman Seminar was that not all students were required to participate in the seminar. When these courses were mentioned in the data, participants often noted that enrollees in the courses were students considered at risk for success at UCF. The courses were seen as so valuable that faculty often expressed a desire that the university require more students to take the freshman seminars. The success of the revamped freshman seminars again demonstrated that the university's Quality Enhancement Plan had met a need for the university as a whole, a requirement for on-going accreditation by SACS.

The final large-scale program, initiated by the philosophy department, emphasized the critical thinking section of the Information Fluency Initiative. Participant G described two of the department-wide activities resulting from the interest in critical thinking:

So what philosophy ended up doing was [a] state ethics bowl which has been very successful. They do it each semester now on campus, and then they go to the regional and in the national. They actually won the national competition in 2004. . . . They also did three conferences and those were a very wide range. They were interdisciplinary and brought a lot of people on campus.

Participant G noted the introduction by the philosophy department of an ongoing university ethics bowl at UCF that involved 120 students over 3 years (Information Fluency Office, 2012, p. 25). The creation of the local bowl led, additionally, to participation in the state and national bowl where top UCF students took first place (Information Fluency Office, 2012). In fact, these ethics bowls have resulted in collaboration between the philosophy department and the Burnett

Honors College to offer a yearly fall semester course entitled “Case Studies in Ethics” (Information Fluency Office, 2012, p. 28). This type of collaboration across disciplines strengthens the university and builds a sense of community (Friend & Cook, 2007; Senge et al., 2000). The critical thinking conferences—organized by UCF’s Philosophy Department—were often referenced in the data as successful elements of the Initiative. The interdisciplinary conferences focused on ethical use of information and involved over 870 participants including student, faculty, staff, and community members (UCF, 2011). These conferences provided opportunities for UCF to encourage and facilitate interconnectedness and interdependency between stakeholders of the initiative and from other colleges.

Interestingly, the critical thinking conferences also reflected differences in the perception of the Information Fluency Initiative by different stakeholders. These differences were mentioned in interviews. Participant B noted discomfort with the emphasis upon critical thinking.

I saw a lot of . . . faculty disaggregating the concept of information fluency. So the philosophers, the faculty, would define information fluency as critical thinking. . . . It’s like you’re pulling apart; that it’s not really information fluency. Is there going to be some kind of capstone where it all comes together, the technical skills, the information literacy aspects? Where it all comes together, and then you can say that person is information fluent if they demonstrate that ability? For them to graduate and be critical thinkers, it’s great, but they are not information fluent.

Participant B here reflected the complex nature of understanding and defining information fluency. Especially from the librarians’ points of view, the elements of information fluency as defined by the initiative—critical thinking, information literacy, and information technology—were understood as inextricably linked. Therefore, all QEP projects would have focused on the topic of information fluency. As noted in the excerpts, however, some teaching faculty perceived the combination of critical thinking and ethical use of information as reflective of the

initiative's purpose. The inclusion of the Philosophy Department's critical thinking proposal demonstrated that the leaders in the Information Fluency Initiative agreed with the broader interpretation of the quality enhancement plan.

Participant A also described the differences in perception of the initiative:

Just coining fluency and all of the discussions we had on campuses about why we're saying information fluency instead of information literacy was pretty heated and pretty energetic because we were trying to do something bigger than and beyond what the librarians defined information literacy as, and so we had to work through all that. . . . I think it's very important when you're going forward with a project like this that you make sure you qualify for people what it is you're really asking them for, and what you really think you are going to do with it.

First, Participant A understood that differences in opinions could be expected in a complex undertaking involving a large and diverse organization. While acknowledging the differences, Participant A also described the importance of clarifying any group's task and the importance of consensus within an organization. The literature, in fact, described tensions that sometimes occurred between librarians and teaching faculty when attempting to study and improve students' information literacy skills (Macdonald, 2008; McGuinness, 2006; Moore & Ivory, 2000; Rollins et al., 2009). Participants recognized the tension between librarians and teaching faculty but also noted that their willingness to compromise and work together were significant to the success of the initiative. The emphasis upon compromise also reflected the need in the learning organization to bring individuals together to reflect upon their differences in order to reach common understandings—or shared mental models—of particular challenges (Senge, 1990, p. 67).

In addition to holding the three critical thinking conferences and the continued participation in the ethics bowls, the philosophy department integrated information fluency learning outcomes into selected courses, impacting 1,712 students between 2006 and 2008

(Information Fluency Office, 2012, p. 25). Participant G described the curricular changes made in the department as a result of the initiative:

The report was originally to do four things, and they ended up doing three of them. The fourth one they started, and again they just didn't have the support to get it done. You can't change curriculum if the teachers don't want to so they changed it in the six classes where they had support.

Participant G reflected here that of four goals set for the initiative, the philosophy department completed three. The fourth goal, to embed critical thinking in all philosophy courses, was not completed. Six courses in the philosophy department made substantive curricular changes that included information fluency objectives, in particular, the critical thinking component.

Reference to meeting three of four goals here acknowledged the difficulties inherent when changing the curriculum for entire departments or programs (Walker, 1990). Participant G also understood that changes were easier to make in curriculum when teachers perceived the value of that change.

In addition to the four department projects described above, the School of Visual Arts and Design collaborated with the Departments of Philosophy and Simulation and Training to develop a video game to introduce students to ethical reasoning (Information Fluency Office, 2012). This multi-year project appeared to be a natural outcome of the philosophy departments' emphasis upon critical thinking and ethics. Eventually named *Bentham City*, the game allowed students to participate in various scenarios that required ethical decision-making skills. The project, developed by an Ethics Game team from Digital Media, eventually relied upon many participants from departments across the college to develop and disseminate the video. The game proved so successful that plans have been made to release it campus-wide (Information Fluency Office, 2012). The game's inclusion in the Information Fluency Initiative demonstrated once again the broad-based, collaborative nature of the initiative. The game's popularity also

reflected that the initiative dealt with an issue clearly important to faculty and students, a SACS requirement for the QEP.

The Cocoa Regional Campus also received a three-year grant from the Information Fluency Initiative to encourage greater participation among its writing lab, the library, students, and selected faculty. Participant L described the project's use of collaboration among writing lab personnel, librarians, and faculty to create interventions designed to improve students' information fluency:

Unfortunately, we did not find any significant differences between the students that had gone through the interventions and those that didn't. . . . Even though our research didn't turn out to show any significance differences, we still believe those things [the interventions] are valuable. . . . We know from anecdotal information we received back from students about the writing center and about the librarians, you know the research may not pan out that way, but when one student tells you, "This really helped me, I would not have been able to write this paper without it." At least you have some idea that those students are at least feeling this though.

Participant L here described a project developed on one of UCF's regional campuses. This project reflected, first, another effort towards broad-based participation in the initiative. Not only was the project on a regional campus, but it also involved the cooperation of teaching faculty, librarians, and writing center personnel. Another important element of this project was the use of assessments to determine the effectiveness of the interventions used by the writing faculty and librarians to improve students' information fluency. Results from pre-and post-tests of the Information Literacy Test (ILT) developed by James Madison University showed no statistical improvements in students' overall use of sources and documentation (Information Fluency Office, 2012). The results of the assessments were a disappointment for the participants; however, informal feedback by student participants indicated that students had valued the interventions. Students indicated that they were more comfortable using the databases and felt more confidence in their ability to write academic papers. This expressed appreciation

led Participant L to believe that students would be more likely to voluntarily visit both the writing center and the library in the future. Two of the writing center's goals for their project were to increase students' confidence in writing and increase students' use of the writing and research center. Informal student feedback did indicate that these two goals had been met.

Individual Projects. Although the large-scale projects at the program level were successful, they also required the support of entire departments. Attempts to add other departmental, large-scale plans to the initiative proved difficult because they involved a great deal of coordination and planning. The individual projects previously mentioned in the Development section of this chapter also appeared in the data as popular and successful elements of the Information Fluency Initiative. Participant D explained why these projects were so popular:

The smaller projects seemed to accomplish more because the larger projects were three-year things where there would be a plan, and they would execute the plan, and then there would be an assessment for an academic program, and that just didn't seem to go as well.

Participant D noted here that the larger projects, which were complex, were more difficult to manage than the smaller projects. Although the large-scale plans were often praised, other participants also noted the challenges inherent in changing curriculum within departments responsible for teaching a broad variety of courses. On the other hand, the individual projects, first suggested by the initiative's National Advisory Board, allowed individual participants to devise projects tailored for the curriculum in a specific course.

Participant E spoke about the national advisory board's place in the development of the small, individual projects:

And we got this group [the National Advisory Board] to come here toward the end of January, and we gave a presentation on what we're doing, what the plans were, and we had some provision in there for some individual kinds of projects . . . and what they came up with . . . is a whole notion of let many flowers bloom, so the more people you can get

involved in this, the better off you are at whatever levels. So that's when we expanded this whole engagement thing that said, let's give faculty members a thousand dollar grant . . . to take a look at information fluency in your course and identify ways that you can develop, foster, increase information fluency.

Here Participant E reflected the value of the board's input and also noted the importance of the individual projects proposed by board member Susan Metros, Associate Vice Provost for Information Technology Services and Associate Chief Information Officer for Technology-Enhanced Learning at the University of Southern California in Los Angeles. The plan, termed the "1,000 flowers approach," was mentioned often by participants as an important addition to the structure of the Information Fluency Initiative. In this plan, individual faculty were encouraged to develop curricular strategies to foster information literacy in their courses. The acceptance of the board's recommendation reflected an important tenet of the learning organization, that of personal mastery. Personal mastery develops from choice because "People learn what they need to learn, not what someone else thinks they need to learn" (Senge, 1990, p. 345). Thus, the smaller projects allowed faculty to develop curriculum plans that would directly impact their own learning and teaching as they enhanced their courses.

Other participants also noted the success of the individual projects. Participant O used a metaphor to describe the development of those projects:

The best thing we ever did. It was like planting a 1000 seeds; some of those seeds fell on stones and withered and died. Some of them produced gushers; it was like drilling wildcat wells. Some are dry holes; some are absolute gold mines.

Here Participant O reflected upon the diversity of the projects. Participant O also acknowledged that although some of the individual projects had not been successful, others were so valuable that they could be compared to gold mines. In fact, ultimately over the five years of the QEP, the information fluency office awarded 61 grants to participants in 39 departments impacting over 21,000 students (Information Fluency Office, 2012, p. 31). The numbers of participants and

students engaged in these small, individual projects supported the overall effectiveness to which participants referred in many of the interviews.

Participant J also noted the value of the individual projects, this time as they related to the university:

I like the fact that they did distribute it in small funds all across campus; that it didn't all go to a few arts and humanities—the writing people which . . . I would probably have thought it was to begin with.

Participant J noted here the broad-based quality of the initiative. Reflecting the librarians' initial wish to create a plan that encouraged inter-disciplinary participation, the individual plans encouraged cross-disciplinary collaboration because individuals developing individual projects attended an information fluency strand during the faculty summer or winter conference through which interdisciplinary dialogue occurred. The participant also noted with surprise that she was allowed to participate in the information fluency initiative even though she was not from the arts and humanities. Here a fundamental aspect of the initiative appeared in the data. The librarians initially included critical thinking and technology with information literacy to encourage broad-based acceptance of their white paper. That inclusion led ultimately to a reframing of the essential problem being discussed by the university—students' inability to find, evaluate, and use sources. Reframing, or articulating new approaches to a problem, often leads to successful change in an organization (Deutschman, 2007; Senge et al., 2000). Reframing the solution to improving students' needs beyond the scope of librarians and English teachers led to changes in participants' perceptions of information fluency and the role individual faculty members could play in improving students' skills.

Changes and Additions to the Initiative. Although the Information Fluency Initiative proved successful and valuable to the university, there were parts of the original plan that

participants noted did not meet expectations. In particular, the appointment of information fluency faculty fellows and development of large-scale departmental plans were eventually discontinued. The faculty fellows were viewed as faculty members who, after participating in the information fluency initiative, would serve for a year as liaisons and support for university personnel interested in information fluency (UCF, 2006). Participants indicated that the intended value of the position was never realized. On the other hand, the three-year projects in various programs were successful, but finding other departments interested in investing time into these types of plans was difficult.

Use of assessment tools also changed during the five-year process for QEP implementation. In particular, the College of Nursing discontinued the iSkills test, an evaluation tool originally designed by the Educational Testing Service to help journalism students track their research skills (Egan & Katz, 2007; MacMillan, 2009). The iSkills test measured students' critical thinking and problem-solving skills but was inadequate because it could not generate scores for specific skills that the nursing program wanted to assess. The nursing program then adopted the Evidence-Based Practice Readiness Instrument, a tool that could generate the information needed. Notable here in the data is the willingness on the part of the Information Fluency leadership to accept the need for changes. Because this was part of a Quality Enhancement Plan mandated by the accrediting agency, the stakeholders might have insisted on keeping to the original strategies. Complex undertakings, however, often require realignment of "strategic choices" (Senge 1990, p. 74). Leaders in the initiative recognized the need for realignment of some of their sources and deliberately chose to revise the initiative's plan to reflect the feedback they were receiving from the various projects.

Just as the leaders of the Information Fluency Initiative were willing to drop activities that did not work in the plan, they were also willing to add new activities to the plan when necessary. In the interviews, participants indicated that the success of the various information fluency projects led to a desire to share the outcomes from those projects. Consequently, four years into the initiative the Information Fluency Office initiated *The Journal of Information Fluency* and the Information Fluency Conference as methods to share the successful activities. First, the journal provided a venue for participants to share their experiences with information fluency and to elaborate on successful activities and outcomes. Secondly, Participant G noted informally that although there were national information literacy conferences, fewer avenues existed through which educators could discuss the broad topic of information fluency. Thus, the conference and the journal were natural outcomes of a need to share the information gained from projects. Participant K noted the value of the conference:

It has been exceptional; there was a conference that is an annual conference every year. I've gone for the past two years. I presented this year, and it's well attended, attended by institutions outside of UCF as well as inside the conference.

Participant K expressed enthusiasm here for the conference and noted the attendance of both UCF personnel and personnel from other institutions. Several interview participants indicated that those involved in the initiative wanted the conversation about information fluency to extend beyond the confines of the university. Thus, the broad-based quality of the initiative ultimately expanded beyond the school's boundaries and affected a broader audience.

Participant L also reflected on the conference's value:

That conference was a real valuable piece of that because we had to interact with people that were doing projects in Orlando. I wouldn't have done that [interacted with people from other campuses] if I hadn't been involved in this project. The conference was voluntary, too, so it was really a matter of feeling interested in it.

Participant L first noted that the conference supported the broad-based participation of the initiative because it drew participants from the regional sites of the university as well as from the main campus. The participant also reflected on personal value gained from attending the conference and noted that the conference was voluntary. These characteristics of the conference reflected literature acknowledging the “learning organization . . . [as] both collective and highly individual” (Senge, 1990, p. 360). In order to effect change, members of an organization must share a common understanding of a problem and a vision for solving that problem (Senge, 1990). The Information Fluency conferences allowed participants to exchange views on information fluency. An organization’s success in any effort may require a shared vision and collaboration, but the individual’s freedom to choose that vision is critical (Goffe & Jones, 2009; Senge, 1990). Because participation in the initiative and the conference were voluntary, individuals felt ownership in the process. In fact, individuals who participated in the individual projects and those who used the information modules often mentioned the voluntary feature of the projects. This participation was in contrast to the larger programs that required buy-in from all participants. The difficulty in recruiting more large-scale, program projects mentioned above might be explained in part by the lack of choice perceived by faculty in those large-scale efforts.

In summary, planning, developing, and implementing the Information Fluency Initiative at the University of Central Florida involved many stakeholders across the university in a plan to improve students’ information fluency. Participants’ descriptions of the processes of the initiative detailed the complexities involved in a university-wide undertaking to address an important issue. As Participant O noted:

It was very difficult, and it was not easy, and it was daunting, and it was hard. . . . We persisted, and we bumped along, and we have created something that is worth its weight in gold to this institution, and it was because of the QEP requirement.

Participant O acknowledged the difficulties UCF faced in developing, planning, and implementing the Information Fluency Initiative. Additionally, however, the participant acknowledged the value of that initiative to the university and linked its beginnings to the SACS requirement for the Quality Enhancement Plan. In fact, those processes involved in the plan proved valuable to the university, to individuals, and to the larger educational community.

Evaluation

After describing and interpreting data from qualitative research, the educational critic must then discern the value of the experience studied. Thus, a requirement of educational criticism in this study was to describe the value of the experience of UCF's development and implementation of the Information Fluency Initiative. Dewey (1963) asserted that education occurs through experience, but not all educational experiences are of equal value. Value is determined through judgment of the quality of the experience, its "agreeableness or disagreeableness" for the participants, and "its influence upon later experiences" (Dewey, 1963, p. 27). To determine that value, critics rely upon connoisseurship and study of the literature in the analysis of data. Although a complex task filled with subtlety, the critic must make this discernment of value.

The task of the critic is to perform a mysterious feat well; to transform the qualities of a painting, play, novel, poem, classroom or school, or act of teaching and learning into a public form that illuminates, interprets, and appraises the qualities that have been experienced. (Eisner, 1998, p. 86)

The analysis of data yielded an understanding of the value of the initiative that illuminated the successes of the program and its impact upon the university, individual participants, and the larger higher educational community.

Successful QEP for the Institution

The Information Fluency Initiative was developed to meet the SACS requirements for UCF's Quality Enhancement Plan. Naturally, then, evaluation might start with determining the extent to which the plan met the expectations of SACS. When asked about the success of the plan, Participant E responded: "Well, I think that the first success is that SACS said, 'Okay. You did okay.'" Participant M elaborated on this success: "SACS said they loved it. They thought we hit it out of the park." The success of the plan, noted by the participants above, was predicated upon satisfaction of the QEP guidelines discussed in the Planning section of this chapter. As noted in the narrative, extensive research by the QEP planning committee determined that information fluency was an issue of concern at the university and a key to successful student learning. Additionally, the university showed its support for the initiative through administrative and financial support. The initiative involved many departments, leading to broad-based involvement of all constituencies in the university. Additionally, the QEP development team expressed clear goals for the initiative and established methods by which those goals would be assessed. The primary goal set for the initiative was to "develop a foundation for creating a culture of information fluency" (UCF, 2006, p. 59). Data from interviews yielded insight into how much that culture has been affected through the initiative.

A Change in Culture Within

The initial requirements of the QEP asked that the plan identify a central issue of concern key to student learning. Requirements dictated by an agency could have yielded a plan to satisfy that agency—a plan instituted for a given amount of time and then forgotten. UCF's plan for the Information Fluency Initiative, however, appeared to have intrinsic value beyond the satisfactory completion of the reaccreditation plan. In fact, many participants noted the QEP's value.

Participant N, for instance, recognized that although the QEP began as a requirement for SACS, it ultimately met a need of the university: “I think it was expediency, and then people realized its value after it was here.” In fact, in similar situations, faculty often think that they are simply being “forced to jump through hoops imposed by an outside agency” (Chase, 2000, p. 444). Reflecting this viewpoint that the QEP was a requirement for reaccreditation, Participant N also noted the value of the initiative beyond its original purpose. Participants defined this value in different terms.

First, participants noted the sustainability of the QEP; the initiative had been continued after the five-year plan and was now a permanent part of the university’s culture. Participant E reflected upon the initiative’s impact:

We have at least been able to imbed information fluency as a permanent part of educational culture at UCF. The fact that we’ve had this office, we’ve spent, you know, a half million dollars a year on it for five or six years. Actually, more than that probably, and we’re continuing to spend money on it and that we’ve said this is valuable, it’s producing kinds of results. We have tools that people have, that we’ve developed to try and teach some of these skills that people are using more and more; those are the online things in the library.

Participant E noted the permanence of the initiative’s impact upon the culture of the university. In particular, the establishment of the Information Fluency Office and the continuance of financial support proved important to the sustainability of the Information Fluency Initiative. Long-term commitment to any organizational change is difficult (Bolman & Deal, 2008; Senge, 1990). Often, in fact, change becomes a matter of compliance to a mandate rather than commitment (Senge, 1990). However, change that becomes an accepted vision for the organization may become part of the institution’s culture. The administrative support, as noted earlier in this chapter, played an important part in the initiative and demonstrated that the

university valued information fluency as part of its vision. This support appeared to be important to the initiative's sustainability.

Participant E also emphasized the usefulness of the initiative in the above quote, noting that the information literacy modules were producing results. Participants often described the success of the information literacy modules and other curricular changes. Participant J, for instance, reflected that the initiative had increased her own awareness of information fluency:

I learned a lot about information fluency. No question about that. I'd never concretely thought about it previously, so I knew there were things wrong. . . . I said these are really bad references . . . but I was not engaged in the literature.

Participant J acknowledged an awareness of problems with students' academic writing, but also acknowledged that she had not defined the problem in terms of information fluency. The initiative had contributed to her understanding of information fluency and how that related to problems she encountered with her own students.

Participants often reflected on their own and other people's increased understanding of information fluency. For instance, Participant K noted: "I think people started accepting where we are in education with technology and access". Personal mastery, a discipline of the learning organization, depends upon individuals' awareness of reality—here the nature of the problem—before change can take place (Senge, 1990). That change often involves alteration of a mental model or the perception of a particular problem (Senge et al., 2000). Thus, the clearer definition of the problem addressed by UCF's Information Fluency Initiative became valuable to all concerned with addressing the problem.

Participant C also noted the initiative's impact:

I mean this whole project forced all of us to think about what we are doing, and how we are doing it, and how we are packaging it, what we're missing, and what are the students really learning from what we're doing, and if they're not learning, what do we need to do differently.

Participant C commented here on a key element of many of the participants' experiences: The initiative highlighted a problem in the university that was not being addressed. Interviews of participants also confirmed conclusions from the review of literature that current university students find academic writing challenging (Howard, 2007; Neely, 2002; Walker, 2008). Faculty and librarians who were interviewed consistently reported that students did not understand how they should use sources, when they should document those sources, or what forms they should use in various disciplines to cite sources. Participants in the university's Information Fluency Initiative also agreed, however, that these skills could be taught and seemed to welcome the university's support in instituting efforts to improve students' information literacy. Identifying the problem was a first step towards change in the curriculum at UCF to address students' need for information fluency instruction (Schwab, 1969; Walker, 1990).

Once a problem has been identified, a group may adopt a set of core beliefs or shared vision for change (Senge, 1990; Walker, 1990). Establishing a shared vision for approaching curriculum problems may lead to the formation of constructive approaches to solving the problem (Walker, 1990). Recognizing the need for information fluency instruction, in fact, led to discussions in the university about the methods to be used for that instruction, leading to valuable changes in the curriculum. Participant F, in the Implementation section of this chapter, described the impact of the QEP on the curriculum in her courses. The information literacy modules had been used as gateways; students had to successfully complete selected modules in order to participate in the research class. Faculty interviewed in the study often noted valuable curricular changes to their individual courses. For instance, Participant K noted that "I have seen a stronger focus on our [the nursing program's] writing" since the inception of the initiative. During the five-year span of the QEP, 136 faculty members developed individual projects to

integrate information fluency skills into their classes (Information Fluency Office, 2012, p. 8).

In other instances, the changes across programs were noted. In particular, faculty in Nursing and Biology noted the value of modules specifically developed through collaboration of teaching faculty and librarians for their disciplines. Data from the QEP five-year report demonstrated, in fact, that the number of academic programs to incorporate information fluency in their programs had increased by 44% (Information Fluency Office, 2012, p. 10).

Additionally, Participant O described a new appreciation and respect for information in a particular department:

In terms of informally what my area has done is develop a greatly enhanced respect for information, the veracity of information, then the vetting of information, the value of information and the combining [of] information into constructs, into ways of thinking—just a whole new way of thinking about this notion of how we develop new ideas. That's what it's done for us, not particular policies but just the way we think.

Participant O noted that the initiative's value went beyond helping students and included a change in how his department viewed information. References to veracity and vetting of information suggested that participants recognized that if students were to be held to certain standards, those standards should be respected in the larger university community. Other participants also noted an increased awareness of the need to model correct information fluency behaviors. Mental models—"images, assumptions, and stories" that inform our understandings of basic concepts (Senge, 1990, p. 175)—are often based upon individual interpretations and assumptions. In the learning organization, individuals' mental models are often shaped through the development of a shared vision (Senge, 1990; Senge, et al., 2000). The university's clarified vision of information fluency influenced Participant O's department. Thus, judging the value and truthfulness of information became more important for all stakeholders.

Finally, UCF's Quality Enhancement Plan impacted people beyond the university. Establishing *The Journal of Information Fluency* and the Information Fluency Conference allowed the university to share successful activities they developed to improve their students' information fluency. Participant H noted that the conference and journal were also developed to keep an "academic focus" in the initiative by encouraging the continued involvement of faculty, not only in improving instruction but also in developing the "scholarship of teaching" (Boyer, 1990, p. 16). In other words, faculty participants recognized the complexity of the initiative and the need to continue both curriculum development and scholarly examination of their own efforts.

Additionally, SACS was so impressed with the strategies of UCF's plan that it adopted the UCF quality enhancement procedures as a model for other institutions. Participant B described hearing about UCF's impact on the QEP model when serving on a SACS review committee:

The six who were there said, "We used the Armacost [a reference to Bob and Julia Armacost who developed UCF's strategy] model at our institution." . . . We were given by SACS: this is what a QEP looks like. It was still fairly new, and people didn't know how to write it, and it was our model.

Participant B referenced the Armacost plan. Julia Pet-Armacost, Chair of UCF's Compliance Certification Team for reaccreditation, and Bob Armacost, Chair of UCF's QEP Development Team, were seen as the architects for the QEP's strategies. Because the QEP process was new, SACS institutions were struggling to define the methods by which they could devise acceptable plans for the accrediting agency. Consequently, the structure used by UCF and developed by its QEP development team became a model for other universities in the Southern Association.

The University of Central Florida's Information Fluency Initiative proved valuable to the university. First, the initiative satisfied an important requirement for the school's

reaccreditation. Additionally, the QEP identified the need for students to improve their information fluency abilities and produced curricula focused on improving those skills. UCF's Information Fluency Initiative also achieved the broad-based participation of the university community. Finally, the Information Fluency Initiative also added to the knowledge of the larger higher education community through the establishment of the Information Fluency Conference and *The Information Fluency Journal*.

Thematics

Eisner's (1998) process of educational criticism includes description, interpretation, evaluation, and thematics. Thus, after assessing the value of the educational experience, the critic seeks to identify themes or messages that recur in the data. As recurring messages from data analysis, themes serve as the basis for the process of qualitative generalization. These themes help the researcher and readers gain insight and understanding of the particular phenomena (Eisner, 1998). Although qualitative research does not generalize from a particular population, it can, through naturalistic generalization, provide insight and understanding that can be relevant to understanding similar situations (Donmoyer, 1990; Eisner, 1998).

Analysis of data in the present study yielded several themes, or messages. Three themes are described in the following section:

1. Thoughtful decisions in the process of the initiative acknowledged the culture of the institution.
2. The initiative led to an increased library presence in the university community.
3. The process itself was valuable and resulted in personal growth for participants, ultimately creating a community of learners.

Thus, insight and understanding of the value of UCF's Information Fluency Initiative may be helpful to other institutions.

Deliberative Decisions

As data were analyzed, the role of decision-making during the process of planning, developing, and implementing the QEP became increasingly apparent. Those decisions were often made with a conscious effort to empower all of the stakeholders. For instance, when referring to particular decisions made early in the QEP, Participant A stated: “I try very hard to disappear and not be the obvious person out there.” Senge (1990) defined this type of leader as a designer, someone who makes decisions quietly and behind the scenes. Because a leader working as a designer often gets little credit, people who want control and recognition do not often choose this role (Senge, 1990). Many of the leaders in the initiative referred to this type of decision-making during interviews. In fact, almost every participant who was interviewed credited another person for the initiative’s success. For instance, Participant M noted: “Elizabeth Killingsworth is really one of the most talented people in terms of being able to very quietly and in a very understated way to get people involved.” The particular leadership style which Senge (1990) described as a designer not only applied to the primary leaders of the QEP, but also to most key players in the initiative who appeared to use this understated and supportive leadership style.

The leadership style impacted the overall initiative’s impact on participants in the initiative. For instance, Participant J noted the atmosphere surrounding the initiative:

A lot of programs I have been part of, it was just I can’t wait for that to be over. I never felt that way with information fluency. They [the people in the Information Fluency Office] are incredibly nice people who are not pushy, who feed you, like a cake, sometimes and are just there to be helpful, and then they’re just a resource as opposed to a time sink.

Participant J acknowledged the approachability of people involved in the initiative. The participant noted that involvement in other university programs was almost painful—she could

not wait for them to be over. On the other hand, leaders of the Information Fluency Initiative were “nice,” even offering cake to participants. The notion of support again appeared in the interview; the office was “helpful.” The participant acknowledged, metaphorically, that the office was a resource—valuable to her—rather than a “time sink,” or a waste of time.

Participants also often mentioned the need to settle conflicts through thoughtful deliberation. Participant A was aware of possible conflicts in the university:

It is a lot of people and a lot of room for misunderstanding and miscommunication. . . . I believe that when you have all these great people that care, and they all have their own ideas, there’s bound to be conflict, and you have to be, you know, willing to embrace that and work through it.

Participant A referred to the size of the university as an important consideration when planning the initiative, a concern mentioned frequently by other participants. Additionally, Participant A was aware of the university culture filled with individuals who were committed to their work, but also held very strong positions. In the ad-hoc bureaucracy of a university, faculty may see change as an “annoying distraction” (Bolman & Deal, 2008, p. 83). The leadership seemed particularly aware of the need to empower stakeholders and to recognize the needs of highly intelligent and motivated faculty to find value in a task and to take ownership of that task (Goffe and Jones, 2009).

As noted earlier in this chapter, university leadership involved in the creation of the information fluency plan frequently described structural decisions made to encourage faculty and librarian collaboration in the development of curriculum. These leaders recognized the value of balancing different points of view and concepts to effect curriculum change (Walker, 1990). In fact, the initial decision to adopt information fluency—defined as a combination of critical thinking, information literacy, and technology—was informed by the desire to include broad-based buy-in for the initiative. Initial decisions made in the choice of the QEP reflected

awareness on the part of the university leadership that implementing the type of broad-based plan asked for by SACS would be challenging, given the varying number of disciplines and programs at UCF and the size of the university. As the QEP was chosen and implemented, leaders of the QEP committee made the decision to name faculty members as co-directors for the Information Fluency Initiative. This decision appeared often in the narrative as important to the success of the program because it recognized that faculty would play a key role in implementation of the initiative. The appointment of faculty as leaders for the Information Fluency Initiative also encouraged broad-based participation in the initiative. Schwab (1971) argued for a plurality of perspectives in curriculum development and suggested that a confluence of differing viewpoints might yield more complete understandings. Leaders in the Information Fluency Initiative actively encouraged this plurality, and participants often mentioned the value of collaborative activities.

Increased Library Place in University Community

In an interview for this study, a participant stated that the library is “no longer a place but a process.” The changing paradigm from scholarly research within four walls to scholarly research conducted in a seemingly endless electronic maze has deep and far-reaching ramifications. The world students come from is interactive and filled with an endless stream of information. Faculty and administration, however, cannot assume that because students know how to access information, they also know how to effectively and ethically use information. In fact, the results of some studies indicated the opposite—that the proliferation of information often confuses students and leaves them unprepared to judge a source’s reliability and suitability for academic purposes (Davis, 2002; Owunwanne et al., 2010; Neely, 2002). When UCF created their Information Fluency Initiative, it was with the recognition that the change in how

information is accessed necessitates innovations in the curriculum and in the relationships between faculty and librarians. Many interviewees reflected the changes that had occurred in the perceptions of the librarians and in their role in the university. For instance, Participant H remarked: “I think faculty always knew the library was there and they used it, but I think that there have been more personal relationships, tighter professional relationships.” Reflected here is the improved relationship between teaching faculty and librarians. Participant N also described the change: “The library has really stepped up what it does in terms of how they interact with faculty and students; they’re very, very responsive to faculty so I found that that’s incredibly useful.” Both participants H and N noted an increase in the library’s presence in the university.

The changing role of librarians was noted in the data as an important outcome of the initiative. First, participants described the existing relationships between teaching faculty and librarians before the initiative. Participant B noted that “it’s [librarianship] a shy and retiring kind of quiet profession, and as the institution moved on, many of the librarians felt left out and disenfranchised from the process [engaging with information literacy and information fluency].” Here the participant reflected that librarians themselves had not been entirely comfortable with their changing roles and the impact of that role in relating to others in the university.

Additionally, Participant C reflected on the relationships between librarians and faculty before the initiative:

We had librarians who were great with outreach over here and involved in making things happen. And over here, either the faculty aren’t responsive, or the librarian’s job is focused on something else, and nothing’s happening there.

Participants B and C both reflected on the roles of librarians before the initiative. In particular, they noted the need for a changing dynamic—a more noticeable presence and active role for the

librarians in the university. Breivik and Gee (2007) called for a “shared campus vision of the library as the pivotal actor in educational reform” (p. 41). The term actor here is notable in that it indicated the more active role UCF’s library and librarians came to play in the university.

Development of the Information Fluency Initiative, in fact, created a new, more prominent role for both librarians and the library at the University of Central Florida. Participant M described a comment at the end of one of the Information Fluency conferences:

I’ll never forget at the end of one [conference]. . . . There were 300 people, and this guy from physics gets up and says, “Librarians rock.”

Participant M referred to the physics instructor’s reaction to the information shared by librarians at the conference. The faculty member’s reaction reflected enthusiasm found throughout the data for the improved relationships among teaching faculty and librarians.

Participant N further noted the expanded role of librarians as teachers:

They [librarians] have sessions at FCTL [Faculty Center for Teaching and Learning]. For example, I was at one this morning. They talk about new acquisitions, new tools online for faculty and new employees there who have new duties and what we can access them for and that kind of thing, . . . and they come to our faculty meetings.

Here Participant N described an increasingly important role of the librarian. With the increase in technological research tools—and the rapid changes in those tools—librarians serve as intermediaries for both students and faculty. In the past, faculty have been reluctant to embrace the teaching roles of librarians (Breivik & Gee, 2006; Moore & Ivory, 2000). Participants in the Information Fluency Initiative, however, have embraced and appreciated that role.

Participant H noted the increased personalization of the library. Several participants, in fact, noted the library’s commitment of librarians to particular departments:

People tend to have a go to librarian now. . . . More people know the librarians by name. They know that each of the reference librarians actually has a specialty. . . . They know who they want embedded in their online class; they know who they want to go to when they’re doing their own research.

Here Participant H recognized that the library had become more engaged with faculty, referenced the specialties of librarians, and noted their value not only to courses but to faculty's own research. The participant also recognized the positive impact that embedded librarians have had on the success of online courses.

Finally, the Information Fluency Initiative served to highlight the importance of the library's role in the university and led to substantive changes—not only in the librarian's role, but as Participant O reflected, in the physical presence of the library as well:

Our learning commons, with a relatively modest investment of resources, has changed the whole climate of the library from a place where one is quiet and introspective and an introvert to one where there is a humming, buzzing, learning climate going on.

Recognition by Participant O of the physical changes in the library reflected the more profound changes in the perceptions of the library's position in the university. These changes reflected Breivik and Gee's (2006, p. 181) assertion that:

Early beliefs that the digitization of collections would negate the need for library expansions have proven to be the wrong answer to the wrong issue. There is a growing consensus that the chief function of academic libraries is not as a storage facility but as an important center for learning.

This reference to a “center for learning” emphasized the need for a more active library. Study of the literature determined that university administrators may suggest downsizing of library personnel and space because the increased presence of digital resources no longer requires a large physical presence (Breivik & Gee, 2006; Mazella & Grob, 2011; Miller, 2010). Librarians' participation in the initiative, however, indicated support at UCF for the central role of librarians and the library in the world of expanded information and resources.

A Professional Learning Community

As faculty, librarians, and other university personnel collaborated in efforts to improve students' information fluency, they also grew both personally and professionally. In fact, participants took problems and turned them into opportunities to learn for both students and faculty. In this way, the initiative supported the development of a community of learners in the university. In the learning organization people work together in order to effect change and to create shared visions for the institution (Senge, 1990; Senge et al., 2000). That interaction allows the organization to develop procedures for change and to align individual objectives with the goals of the organization. Ultimately, the process of working together to create UCF's Information Fluency Initiative was itself valuable, led to transference of skills across disciplines, and created a professional learning community dedicated to increasing the information fluency of students at UCF.

Personal mastery. Participants in the initiative often described personal growth as a result of cross-discipline collaborations. Personal mastery, a discipline of the learning organization, reflects a change in the organization's culture which facilitates group and individual growth (Senge, 1990; Senge et al., 2000). First, participants in the initiative referenced a new awareness of information fluency. For instance, Participant O acknowledged: "Our conception of what information fluency was seven years ago changed dramatically over the seven year period." Additionally, Participant G described his knowledge as "Almost none" when asked about the concept of information fluency before the initiative began. Other participants, quoted earlier in this chapter, also noted their improved understanding of information fluency.

Participants also noted growth in areas outside the focus on information fluency. Their views were examples of how people in learning organizations often benefit from the collaboration inherent in teamwork (Senge, 1990; Senge et al., 2000). Some participants, for instance, noted improved assessment abilities. Participant F stated: “For one thing I learned not to be afraid of assessment, and that was . . . a huge deal for me personally and professionally.”

Participant H also noted personal growth in assessment:

I learned an awful lot about assessment; whether it was, you know, large scale, external assessment or individual project assessment. I learned a lot about collecting data—made lots of mistakes along the way collecting data, but I think I’ve gotten a lot better about it.

Both Participants F and H described here a discomfort with assessments before the initiative began. They also noted that participation in the initiative encouraged growth in their understanding of, and comfort with, assessments. Assessment had become increasingly important because UCF had “incorporated the academic learning compacts into its assessment” of baccalaureate programs to meet state mandates (UCF, 2006, p. 20). Personal Mastery in the learning organization goes beyond improvement of skills to “continually clarifying what is important to us” (Senge, 1990, p. 141). Participants reflected this tenet of the learning organization when they described the importance of the assessments. Because the QEP required evaluations of the initiative’s projects and because programs were evaluated through the learning compacts, participants had to increase their abilities not only to use assessment tools, but also to interpret the results of those tools. UCF had an Operational Excellence and Assessment Support Office in place before the initiative. Several participants noted that this office, developed to oversee the university’s assessment activities, helped them assess their own projects. The collaborative aspect of the initiative, then, encouraged participants to increase their understanding of, and appreciation for, program assessment methods necessary to the university.

Participants noted other personal areas of growth. For instance, Participant L described learning about the writing center and the librarians: “Personally, I learned so much about what our writing center is doing and what our librarians are doing to help our students.” Participant L here reflected new insights about the roles the writing center and librarians played in helping students.

Participant C also noted areas of personal growth:

I learned a great deal about every topic we chose, even though you would think, as a librarian, I would know whatever it was. . . . I say that because whatever topic we picked, we had to decide how much of that topic we were going to bite off to put in that module. And so, you had to get a feel for what’s most important to faculty and what’s most important about the curriculum. And you had to brainstorm ideas about how to make this fun and interesting, . . . what we call chunking the content.

Participant C referenced here the collaboration that took place to develop the curriculum for the information literacy modules. Although originally a concept from the librarians, the modules would not have been possible without the participation and expertise of information technology personnel in the Center for Distributed Learning. Additionally, Participant C referenced the collaboration needed between teaching faculty and the librarians to develop the modules’ content.

Senge (1990) recognized personal mastery as “lifelong generative learning” (p. 133) that went beyond the acquisition of skills to a commitment at the institutional level. The processes through which participants engaged in activities to improve students’ information fluency not only increased their own understandings and insights but also increased their understandings of the institution’s vision for student learning. Participation in the Information Fluency Initiative thus facilitated learning for individuals in areas outside the field of information fluency and proved valuable to those individuals and the institution.

Mental Models. Senge's (1990) discipline of mental models refers to the "deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action" (p. 8) in an organization. During the planning stages of the Information Fluency Initiative, librarians recognized that information literacy was identified by many in the university as a term exclusively used by librarians. By broadening their concept to information fluency, librarians changed the focus of their white paper to include a wider interest in critical thinking and computer literacy.

When the SACS leadership team selected information fluency as the QEP topic, they reflected the nature of UCF as a school with a tradition of technology as noted by Participant E:

But they [the SACS leadership team] basically took the information fluency because we were looking at it was more technology oriented, that's more sort of a spirit of UCF.

Participant E noted the emphasis upon technology in the university. Inclusion of computer literacy in the initiative reflected the university's beginnings as Florida Technological University (UCF, 2012b) and the continuing importance of technology to the university.

As noted earlier in this chapter, the inclusion of critical thinking in the initiative appealed to the interests of faculty. Participant N noted:

The more I talk to other faculty about it [critical thinking], the more they see it as a significant problem—plus an area they want to work on, and so that focus within information fluency I think is good. I think information literacy, although it's extremely important, it just doesn't have that appeal to people.

Participant N confirmed the importance of critical thinking as a part of the initiative. Because faculty recognized a need to improve students' critical thinking skills, they were interested in participating in the initiative. The Information Fluency Initiative, by including computer literacy and critical thinking with information literacy, thus created a model to improve students'

academic writing that many in the university accepted as useful to themselves and the organization.

Participant M acknowledged that the complexity of the problem surrounding students' academic writing encouraged interest for the initiative throughout the university community. Learning organizations encourage the transference of knowledge through team learning and collaboration (Finch, et al., 2010; Senge, 1990; Senge et al., 2000). Thus, the QEP development team's effort to define information fluency and disseminate that definition throughout the UCF community created a framework—or mental model—within which the concept could be understood and invited broad participation in the learning organization.

Team Learning. Participants also noted an improved collaborative relationship between faculty and librarians as a result of the initiative. This relationship did not seem serendipitous. Data from interviews reported in the Planning section of this chapter indicated that leaders in the initiative, aware of the university's culture, carefully structured the initiative to encourage such relationships in the program so that no one group of stakeholders would have ownership. Senge (1990) described an effective team as one in which members “complemented each other's strengths and compensated for each other's limitations” (p. 4). For instance, a new position for information fluency was created in the library, but the directors of the Information Fluency Office were faculty. Thus, a symbiotic relationship was created wherein faculty and librarians worked together, reflecting the university's value for collaboration.

Participant M noted UCF's President's emphasis on collaboration:

We are huge on collaboration. Anytime you can say, you know, we collaborated you get a little extra gold star. . . . One of Dr. Hitt's slogans is we are the partnership university, and he takes that pretty seriously so everybody else does too. We're always talking about our partners.

Participant M recognized that the broad-based nature of the initiative encouraged collaboration—something valued by university leadership.

Participant F also noted the importance of collaboration in the initiative:

A lot of it [the initiative] was fostering collaboration between departments; in fact, I think that was probably the biggest, the biggest thing that came out of the QEP that wasn't there before. A lot of departments started talking to each other that hadn't been previously.

Here Participant F recognized that the initiative fostered collaboration between participants from across disciplines and encouraged the development of new, important relationships.

Librarians collaborated with teaching faculty to develop the content for information literacy modules that were integrated into the curriculum. They also collaborated with information technology personnel to develop information literacy modules that could be discipline-specific. Additionally, faculty developing individual projects met with faculty from other disciplines and librarians to share information about those projects during the summer and fall faculty development conferences, thus helping one another with concepts and sharing the outcomes of the projects. Participant N noted the value of those meetings: "We actually had a meeting with all of the people who had been awarded that grant to sit and talk with each other to find out what everybody else was doing. So that was good."

In the learning organization, team learning provides a venue for stakeholders to deliberate and come to consensus beyond their unique perspectives (Teague & Anfara, 2012; Hilliard, 2012; Senge, 1990). Team learning also is a "process of aligning and developing the capacity of a team to create the results its members truly desire" (Senge, 1990, p. 236). The structure of the Information Fluency Initiative encouraged participation that crossed discipline and program boundaries, therefore increasing the likelihood of a consensus by participants for the definitions of information fluency and for solutions to meet a perceived need by many in the university.

Shared Vision. Beyond impacting personal learning, the initiative also impacted the culture of the university. In fact, collaboration among teaching faculty and librarians involved in the initiative led to a “genuine commitment” (Senge, 1990, p. 9) for changing the way the university would develop students’ information fluency skills that reflected a shared vision.

Participant O reflected the nature of that vision for the Information Fluency Initiative:

Information fluency by its title, by its nature, by its development demands shared vision. No one owns information. Everyone owns information if you know what I mean. . . . Information fluency breaks almost every boundary in every silo. It cuts across disciplines, cuts across departments; it cuts across colleges; it cuts across institutions.

As noted by Participant O, the nature of Information Fluency encouraged dialogue across the university. Because students’ information fluency and academic writing was an issue of concern for many in the university, there was a broad interest in the initiative to develop a commitment to meeting students’ needs.

For example, Participant C noted the change in the university’s approach to plagiarism:

I think we looked at plagiarism on kind of a case by case basis, and we started looking at it more globally as a university issue to tackle instead of “my class today wants to hear about plagiarism.”

Here Participant C noted that the vision for solving plagiarism evolved through the discourse between faculty and librarians who created the information literacy modules—reflecting the importance of dialogue in the learning organization to effect change (Day, 2001; Finch et al., 2010; Flood, 1999; Senge, 1990).

The size of the University of Central Florida did impact the number of people engaged in the initiative as Participant A reflected:

We have 10,000 employees and 60,000 students. And due to the immensity and complexity . . . there’s no way everyone engages, but I believe that there is a sizable group of people, significant group or groups, that have this knowledge that have moved it forward.

Participant A noted the difficulty of engaging the entirety of a large university in any project. Engaging institutions in large-scale change can be difficult (Chase, 2000). Participant A also reflected, however, the building of a professional cohort within the larger institution who defined information fluency and designed specific approaches to improving information fluency at the university.

Participant H also noted a perceived limitation of the initiative: “I think that the administration has a shared vision. I will not say the whole faculty shares in that vision.” Participant H, a faculty member, recognized that “academics spend years developing expertise and credentials in their discipline. . . . They tend to resist changes from the outside or changes that force them to think differently about their jobs” (Chase, 2000, p. 444). Participant N, however, noted: “I think it was expediency, and then people realized its value after it was here.” Participant N reflected other participants’ enthusiasm for the value of the initiative. Participant N’s comment also reflected literature that members of an effective learning community perceive the value of their participation (Friend & Cook, 2007). Although the size of the university and the interests of faculty, then, may have limited the number of participants, those involved in the initiative noted the value of their participation.

The Information Fluency Initiative encouraged the development of a professional learning community within the university to improve students’ use of academic sources. The initiative developed a vision that participants were committed to because it reflected “their own personal vision” (Senge, 1990, p. 206). In particular, the cross-disciplinary nature of the initiative encouraged sharing of different perspectives regarding the collegiate experience and learning and thus contributed to the enhancement of the university’s vision.

Systems Thinking. The stakeholders in the initiative—those teaching faculty, librarians, and administrators directly involved in the initiative—noted changes not only in their perceptions of themselves but also in their appreciation for and understanding of participants from other areas of the university. For instance, Participant F described those changes:

A lot of it was fostering collaboration between departments. In fact, I think that was probably the biggest . . . thing that came out of the QEP that wasn't there before. A lot of departments started talking to each other that hadn't been previously.

Here Participant F reflects a need for systems thinking, the fifth discipline, in the organization—a need for individuals in an organization to be aware of the relationships existing between stakeholders in separate parts of that organization (Senge, 1990). Thus, creation of the Information Fluency Initiative led to a professional learning community, an educational community that reflected the tenets of Senge's learning organization of shared vision and purpose (Teague & Anfara, 2012; DuFour, 2003). Further, through their shared vision and collaboration over the 5-years of the initiative, participants worked to “bring about sustainable reform” (Teague & Anfara, 2012, p. 58). The emphasis by leaders in the Information Fluency Initiative on the importance of cross-disciplinary cooperation to effect change in the university, thus reflected Senge's (1990) emphasis upon systems thinking—the need to understand the whole and complex relationships between elements of the organization.

In summary, the professional learning community of teaching faculty and librarians dedicated itself to increasing the information fluency of UCF students. Those individuals who participated in the information fluency projects shared a common understanding of the problems students face when researching and saw the need to teach research and documentation skills explicitly, over time, and in the context of students' coursework. Participants noted the changed, collaborative relationship between librarians and faculty and the changing roles of librarians that

allowed them to bring their expertise to the learning organization. Finally, participants often noted a feeling of camaraderie with other participants that supported the on-going information fluency learning community. The Information Fluency Initiative used collaboration by faculty, librarians, and information technology professionals to create a shared definition of information fluency. The initiative also created understandings by participants of the nature of problems connected with students' use of information and how to effect change in the university's approach to improving students' information fluency. This emphasis on the importance of cooperation across disciplines to create a shared vision and university-wide goals for the Information Fluency Initiative, therefore, reflected Senge's (1990) emphasis upon the importance of the interrelatedness of the five disciplines when implementing change in an organization.

Summary

This qualitative case study yielded insights into how the University of Central Florida planned, developed, and implemented its Information Fluency Initiative. Study of the literature and my connoisseurship informed analysis of data collected through interviews, document analysis, and observations. Key ideas were identified through inductive analysis of data and categorized into domains.

The four dimensions of educational criticism—description, interpretation, evaluation, and thematics—yielded understanding of the processes used to successfully develop a professional learning community. Narrative analysis described the processes used to plan, develop, and implement UCF's Information Fluency Initiative. Interpretation of the data yielded understanding of how participants in the initiative made deliberative decisions that encouraged collaborative efforts across disciplines. Evaluation of the Information Fluency Initiative determined its successful role in the reaccreditation process. The Initiative also produced

curricula designed to improve students' information fluency at the University of Central Florida through broad-based collaborations in the university community. Through the scholarly activities of participants, the initiative has also impacted the larger, higher education community. Finally, three themes identified through analysis of the data were (a) the importance of leadership decisions that acknowledged the institution's culture, (b) the development of a more active library presence, and (c) the development of a professional learning community.

Chapter Five summarizes the study and includes a discussion of data analysis, limitations of the study, implications for leadership, and recommendations for future study.

Chapter Five Summary and Discussion

May 9, 2013

At the end of the Summer Faculty Development Conference people are relaxed and smiling. There is energy in the room, and teams huddle for last minute discussions. Participants in the information fluency strand have just completed a four-day faculty development conference and are now preparing to present their plan for inclusion of information fluency in their curriculum.

This is the culture of UCF, a large, metropolitan university with an emphasis upon collaboration within the community and between surrounding state colleges. I recall Participant M's remark that "One of Dr. Hitt's [President] slogans is we are the partnership university, and he takes that pretty seriously so everybody else does too." The emphasis upon collaboration in the community seems to have filtered down to the faculty assembled today for the closing session of the Information Fluency track of the conference.

My observations of the final meeting for the information fluency strand in UCF's annual summer faculty conference noted the university's culture of collaboration and participants' enthusiasm about their own projects. Collaboration in this context is positive for both participants and the university. In fact, one of the themes discovered in the analysis of data was the success of the professional collaborations in UCF's Information Fluency Initiative. Although cross-discipline collaborative efforts may prove challenging for faculty at the university level, many college students today are natural collaborators. As active users of the Internet, particularly social networking sites such as Facebook and Twitter, millennial students share everything from favorite foods and restaurants to the latest news. Because millennials have different ideas concerning information sharing, the Western notion—that ideas may be owned—may not be as clear to millennials as previous generations (Blum, 2009). Ironically, the

information-sharing habits students effectively use in their online world may be labeled plagiarism in academia.

Research for this study began with questions about plagiarism: Is plagiarism greater in the information age? Why do students plagiarize? Is plagiarism connected to a misunderstanding of the definition of plagiarism itself? The journey to understand student plagiarism, however, led to an understanding of the complexities of the problem. Study of the literature confirmed that students often struggled when writing academic papers and that teaching faculty linked plagiarism to a need for improved critical thinking skills. Literature that discussed plagiarism also discussed information literacy—a concept defined by the Association of Research Librarians as the need to find, evaluate, and use sources (ACRL, 2000). Finally, many of these sources in today's information rich environment, in addition, require the use of technology.

A search of the literature determined that some institutions have incorporated the improvement of information literacy skills into plans to satisfy accreditation standards. UCF's Quality Enhancement Plan for reaccreditation in 2005 provided a case where all three elements from the literature—critical thinking, information literacy, and computer literacy—came together within the topic of information fluency to satisfy SACS requirements. The inclusion of critical thinking and computer literacy into UCF's Information Fluency Initiative identified the link between faculty's perception of a need for more critical thinking, the librarians' emphasis on information literacy, and the role that technology is now playing in our research efforts.

Purpose of the Study

The purpose of this study, therefore, was to determine how a university planned, developed, and implemented an information literacy program. Interest for the study was

grounded in my own experience as a community college writing teacher and in study of the literature surrounding how students access, evaluate, and use sources in their academic writing.

Qualitative research takes place in a natural setting and seeks to explain complex phenomena. The Information Fluency Initiative was a complex undertaking that required a broad-based commitment at the University of Central Florida to enhance students' academic research and writing skills. A qualitative case study, through analysis of interview transcripts, pertinent documents, and observation notes, yielded heuristic understandings of that process.

Summary of Related Literature

The entering college student today has grown up in an age of information. Because information is readily available through the Internet, in some ways young people have more experience than preceding generations at accessing information. Faculty at the university level, however, have frequently recognized that students do have problems accessing and evaluating information for academic papers (Auer & Kruper, 2001; Chao, Wilhelm, & Neureuther, 2009; Lindsay, 2010). Additionally, examination of studies revealed that many faculty perceived a problem with plagiarism at the college level and have incorporated various methods to detect and punish these activities (McCabe & Trevino, 1993; Melgoza & Smith, 2008). In fact, academic integrity programs in many universities have incorporated various methods to deter the inappropriate use of sources in student papers.

Other faculty, however, have suggested that the problem is not one of morality and intentional cheating on the part of students. Faculty have suggested, rather, that students lack necessary skills to effectively find, evaluate, and use sources (Albitz, 2007; Howard & Davies, 2009; Neely, 2002). Students who have grown up in the Information Age may not discern the difference between valid, academic sources and the types of general information found on the

World Wide Web. In fact, faculty noted that many students had no real understanding of the need for credibility and validity for academic sources (Blum, 2009; Borg, 2009; Posner, 2007). Additionally, faculty noted that when students used information in papers, they often wrote a type of patch-writing that poorly integrated information into their academic writing (Howard, 2007; Howard & Davies, 2009). Thus, faculty in some studies linked the problem with students' academic writing to the need to improve critical thinking skills (Albitz, 2007; Shonrock & Crull, 2009).

Librarians have also identified a problem with students' abilities to find, evaluate, and use academic sources. In 2001, the Association of Research Librarians defined five standards by which students' information literacy might be evaluated (ACRL, 2000). In particular, Standard Three emphasized the importance for students to critically evaluate and use sources (ACRL, 2000). Standard Five emphasized the ethical concerns of source use (ACRL, 2000). These two standards supported faculties' beliefs that students should be critical thinkers who use information ethically. This recognition that student plagiarism may result from a lack of skill on the part of students has led to collaborations between individual faculty and librarians to improve students' research skills.

The literature reported many successful collaborations between faculty and librarians (Bean & Thomas, 2010; Floyd et al., 2008; Jackson, 2007). These projects generally included one faculty member collaborating with one librarian to improve students' information literacy skills. Some institution-wide programs to improve students' information literacy have now been advanced (MacMillan, 2009; Meyer et al., 2008; Warner, 2009). Because these institution-wide programs are seeking to improve the research and writing skills of students with broad-based

approaches, a case study of one university's approach could inform others who wish to work with the problems surrounding student academic writing.

Instituting change in information literacy policy at a small college might be fairly straight-forward. For instance, Participant C noted: "It would be much, much easier to implement an information fluency QEP at a school with 2,500 students." However, a large university, as noted in the data and the literature, faces many challenges when striving to institute major university-wide changes (Chase, 2000). Dealing with those challenges may be easier in the learning organization where "people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (Senge, 1990, p. 3). Because the University of Central Florida approached the implementation of change through a collaborative, supportive process, learning organization theory was appropriate for this study.

During data analysis, the importance of collaborations across the university community that increased a sense of community and effected cross-curricular changes to curriculum became apparent. Salient literature consulted during the process of data analysis informed my understandings of the importance of this collaboration. Indeed, Montiel-Overall (2005) suggested that the most effective approaches to improving information-using skills of high-school students occur when teachers and library media specialists collaborate to integrate curriculum across disciplines. Because participants in this study frequently noted the value of their cross-discipline collaborations to create curriculum, this literature supported the importance of identifying collaboration in the analysis of data.

Additionally, because the Information Fluency Initiative encouraged the formation of a professional community, a review of the literature surrounding those communities informed data analysis. The literature reflected that developing such communities may contribute to a university's ability to effect change (Finch et al, 2010). Because the Information Fluency Initiative resulted in the development of a professional learning community, that literature clarified understanding of participants' experiences.

Finally, the University of Central Florida's approach to SACS Quality Enhancement requirement encouraged professionals across the university to engage in activities to improve teaching strategies and curriculum for the teaching of information fluency. Those faculty activities spanned the roles of faculty in both teaching and scholarship. Thus, literature surrounding the scholarship of teaching and learning to effect meaningful curriculum change at the university level became salient to the study.

Methodology

Chapters Three and Four described the methodology used in the collection and analysis of data. Qualitative research allows for complexities (Eisner, 1998). In fact, the qualitative researcher seeks to describe complexities so that she may explain the uniqueness of certain situations (Patton, 2002). The processes involved when instituting a university-wide initiative are complex, involving many departments and personnel. Therefore, qualitative research is necessary for a case study of this type.

Qualitative research also takes place in a natural setting without manipulation of that setting (Patton, 2002). The case study as a form of qualitative research allows the researcher to focus on a case occurring within a natural setting. Case studies also have boundaries so that the unique qualities may be understood (Patton, 2002, Stake, 1995). The Information Fluency

Initiative occurred at one school, and SACS required that a five-year assessment report be submitted. The Initiative was also planned and initiated by a core group of stakeholders, giving a boundary for participants. Because I wished to understand how a university planned and implemented a complex, institution-wide plan that involved a limited number of stakeholders to effect change, a qualitative case study was appropriate. The clear boundaries within a natural setting were thus appropriate to a case study design,

Data Collection

Chapter Three detailed the collection of data. To gather data for this case study of the University of Central Florida's Information Fluency Initiative, I used document analysis, in-depth interviews, and observations. The researcher uses more than one methodology in case study to give a comprehensive understanding of the case (Patton, 2002). Use of the three strategies gave a holistic perspective to explain how the program was planned and implemented (Eisner, 1998; Merriam, 2001; Stake, 1995). These three methods for data collection also provided for enriched data and contextualized the evidence.

Because qualitative case study designs typically use interviews, 14 participants were interviewed (See protocols in Appendices A, D, and E). These participants were administrators who were directly involved with the QEP planning process and members of the Information Fluency Office. Additionally, librarians and teaching faculty who participated in the Information Fluency Initiative were interviewed. All participants received letters and human subjects consent forms with details of the study before they agreed to the interviews. Additionally, before each interview, participants were given a hard copy of the consent form to read and sign. All interviews were private and took place in spaces chosen by the participants. The interview questions were informed by the literature review and my connoisseurship as a writing teacher.

Data from the QEP proposal and five-year analysis of the QEP initiative were also analyzed as documents related to the case study. Additionally, careful observations of UCF's 2013 Faculty Teaching Summer Conference also added to the understanding of the case.

Data Analysis

Chapter Four described the methods used in analysis of data. Key ideas and concepts were identified through content analysis of documents (Marshall & Rossman, 2006). Using inductive analysis (Hatch, 2002), key ideas and terms were identified in the interview transcripts. Initially, the words “planned”, “developed”, and “implemented” were identified as important to understanding the process. A closer reading of the data also identified the domains entitled Digital Natives and Research, Conflict, Decisions, Support, Shared Vision, Collaboration, and Value. Further analysis of documents and observation notes did not contribute new domains but added to the understanding of those domains. Techniques from narrative analysis (Merriam, 2001; Stake, 1995; Tierney & Lincoln, 1997) were then used to report the planning, development, and implementation of the Information Fluency Initiative because transcripts from the interviews provided the detailed descriptions that suggested narrative approaches would be appropriate.

The processes of educational criticism—description, interpretation, evaluation, and thematics also informed the analysis of data (Eisner, 1998). First, the processes of planning, developing and implementing the information fluency initiative were described. Because description alone does not serve to explain a phenomenon, interpretations of the processes also informed the analysis. The process of evaluation then sought to understand the value of the initiative. Finally, thematics explored the recurring messages that could help to heuristically understand the implications for the initiative (Eisner, 1998). During analysis, three themes were

identified that incorporated elements from the domains. These themes recognized that thoughtful decisions in the process of the initiative acknowledged the culture of the institution; the initiative led to an increased library presence, and the process was valuable to participants both professionally and personally.

Recommendations for Practice

This case study suggested recommendations for universities instituting broad-based initiatives to improve students' abilities to write academically. Additionally, the study suggested recommendations for universities seeking to encourage a community of learners dedicated to working together to improve complex problems.

Improving Information Fluency

Information fluency at a university can be improved through curriculum that makes use of constructivist activities. When searching for a student learning issue that needed attention, UCF identified a need to improve students' information fluency. This topic combined information literacy with critical thinking and computer literacy. This confluence not only reflected UCF's own research, but also the literature review for this study. The Internet and computers have fundamentally changed the way information is accessed. In this world, the copy-and-paste function is often seen as a fast and efficient use of information. For millennials who have grown up accessing information in this manner, the concept of ownership, especially of ideas, may not be clear (Blum, 2009; Borg, 2009; Posner, 2007). In fact, millennials might often consider rules for documentation confusing.

Teaching these students about source use may require a different approach than one that exhorts students not to plagiarize. The constructivist approach to learning would suggest that students can learn the benefits of finding valid and credible sources and thoughtfully use that

material to support their own ideas (Bruner, 1996; Novak, 2010). The research involving patch-writing and approaches to teaching writing and critical thinking skills support this notion (Howard, 2007). The interest shown by faculty participants in UCF's information fluency initiative—especially the critical thinking aspect—demonstrated the need for developing curriculum that includes instruction in the critical analysis of academic sources.

Additionally, the vast array of Internet sources has sometimes made research more confusing and challenging for college students who are used to easy access through Google and other search engines. Although students are frequent users of technology, they need instruction in searching for and evaluating scholarly, peer-reviewed sources (Breivik & Gee, 2006; Neely, 2002). Library databases designed to provide access to those sources often require different search skills from those used in wide, Internet searches. The Information Fluency Modules developed at UCF demonstrated one method through which a large university could offer valuable information literacy instruction to students struggling with evaluating and using scholarly sources. The enthusiasm for the information literacy modules by both teaching faculty and librarians at UCF demonstrated the usefulness of this type of instruction.

Data from this case study demonstrated that improving students' information fluency skills is a complex task involving many stakeholders. Lack of those skills lead to patchwriting and unintentional plagiarism (Howard, 1995). However, curriculum developed through the UCF Information Fluency Initiative that specifically addressed those skills positively impacted students in programs such as the nursing college and the student freshman seminars. Additionally, assessments for individual projects often demonstrated that students' skills improved. Universities seeking to improve student abilities to find and evaluate sources and

successfully use those sources could therefore encourage and support cooperation between teaching faculty and librarians to develop curriculum aimed at improving these skills.

Changing Dynamics

A new research paradigm requires changing roles for the library and librarians in the university. Faculty and librarians at the University of Central Florida understood that the changing dynamics of the research environment—reflected in the literature—indicated a need for new curricular approaches (Breivik & Gee, 2006; Burkhardt, 2007; Neely, 2002). The decision to combine the elements of information literacy, critical thinking, and technology reflected the complexity of the issues surrounding students' use of sources in academic writing. Because the new research environment is complex, the old paradigm of the quiet sacrosanct library has disappeared. However, the advent of electronic sources does not negate the importance of libraries or librarians to the university. Instead, the librarians at UCF have taken on a more active role in the university community. They have increased outreach to the university community through discipline-linked roles, and they have designated individual librarians as specialists for particular disciplines. Partnerships between online faculty and librarians have increased online students' access to librarians. Librarians have developed, with the help of technology personnel and teaching faculty, electronic teaching modules to increase students' information literacy. Although these types of activities were reported in the literature, establishing university-wide approaches such as the initiative at UCF, are less frequent (Bean & Thomas, 2010; Figa et al., 2009; Floyd et al., 2008). The Information Fluency Initiative, in fact, demonstrated that changing the relationship of the librarians to the university community had a positive impact. Universities should recognize the changing dynamics of the research and teaching environment and support librarians in outreach programs designed to form active

relationships as faculty and librarians work together in the university community. Thus, librarians and the library remain central to the mission of the university.

Developing the Professional Learning Community

Thoughtful change initiatives can create professional learning communities at the university level involving collaboration across disciplines. Universities at times face the need to implement university-wide changes. With the implementation of the SACS Quality Enhancement Plan, member institutions, in particular, must identify—through broad-based cooperation—a need in the institution related to student learning and must fund a program to address that need in order to meet reaccreditation standards. However, collaborations across academic silos can be challenging. As noted in Chapter Four of this study, conflicts arose at times between stakeholders who had different understandings of the term information fluency and the methodologies the university should use in its approach to the QEP. Because highly motivated university professionals are committed to their particular interests and departments, conflicts often arise. Thoughtful decisions by leaders in the initiative, however, led to resolutions of conflicts during the process of planning, developing, and implementing the initiative.

Key decisions by leaders in the UCF initiative also led to the identification of a real need to improve students' information fluency skills in the university. Successful, cross-curricular projects are valuable to an educational community when they are “important enough to maintain their [faculty’s] shared commitment” (Friend & Cook, p. 10). Participants in the Information Fluency Initiative often noted the value of their participation because they perceived that it met a real need of students in the university. Thus, UCF’s Information Fluency Initiative encouraged

collaborations from across disciplines because some teaching faculty and librarians perceived the value in the initiative.

Collaborations on projects and through designing the information literacy modules led to a sense of community among participants in the initiative. A professional learning community “constructs a shared vision of the changes and improvements on which they [members] will work for the increased learning of students” (Hord, 2008, p. 12). Because interview participants often reflected changes in their understanding of information literacy and fluency, their collaborations reflected the growth of a learning community to improve students’ skills. These changes indicated what Senge et al. (2000) noted: effective teams bring members to a “common awareness of each other; their purpose, and their current reality” (p. 74). Reflecting this awareness, participants often noted a greater appreciation for individual participants in the initiative. Participants also noted an improved understanding of the university’s policies and the ability to navigate through that organization. Through collaboration, UCF’s Information Fluency Initiative encouraged the development of a successful professional learning community at the university level. The QEP planning committee identified a need in the university. Decisions made by key leaders in the initiative then encouraged collaboration among individuals across disciplines and departments. Finally, meaningful dialogue between those participants led to a community that shared common visions for improving student skills.

Implications for Leadership

This case study suggested that institution-wide initiatives such as the QEP require both administrative and financial support. Further, participants who are allowed to take leadership roles in those initiatives feel empowered and vested in the success of the initiative. Finally, identification of a real need in the university and support for scholarship to address that need

encourage participants to engage in meaningful research and assessment to improve teaching and learning.

Valued Participation

Implementing a university-wide process to effect change in a large university can be challenging. However, participants are more likely to embrace a process when they feel that it is valued by the university. Support, both administrative and financial, encourages that participation. Professionals in the university are also more likely to participate when they feel empowered in the process.

Administrative Support. *University leadership can encourage participation in school-wide initiatives by demonstrating value for that initiative.* Participants in this study often noted the importance of support from the institution. In particular, university acknowledgement of the Information Fluency Initiative led to the perception that participation in the initiative was valued. The president of UCF, John Hitt, attended the QEP planning meetings and participated in the final selection of the QEP. Additionally, the invitations to participate in the initiative and the descriptions of the initiative indicated to participants that the university was dedicated to the initiative's success. When professionals perceive that their time and input are valued, they are more likely to participate in processes outside their disciplines (Friend & Cook, 2007; Goffe & Jones, 2009; Chase, 2000). Administrators seeking to encourage broad-based participation in university initiatives should show the institution values that participation. In particular, President Hitt's involvement in the topic selection process encouraged participation in the initiative.

Financial support. *Initiatives—especially university-wide initiatives—should be given appropriate resources to ensure success.* The Information Fluency Initiative required financial support because additional personnel were needed to build the information literacy modules and

to run the program. As noted in the literature, because many academic sources are now located online, there is a perception by some school administrators that the number of library personnel and the physical presence of the library should be reduced (Breivik & Gee, 2006; Mazella & Grob, 2011; Miller, 2010). The literature and data from this study suggested otherwise. In fact, the additional position acquired in the library was noted in the interview data as particularly important by Participant B: “It was an indication of a commitment through resources.” Analysis of data in this study suggested that although the increasing amount of online sources may require a changing, more flexible role for librarians, a vital and dynamic library presence continues to be important to the mission of the university.

Sufficient financial support for any institution-wide initiative indicates commitment on the part of the university and also encourages participation. Participants noted the importance of financial support for the larger, program-wide projects. The smaller, individual incentives also required financial support. Although participants often noted that the financial incentives were not the primary motivation for participation in the initiative, they also noted that the \$1,000 grants for individuals gave them further incentive to participate. Participant M noted:

One important thing as far as university leadership is to somehow incentivize that and, OK, how do you incentivize it? One way you actually do it is with money. We give \$1000 grants . . . and there is some kind of credence or shout out given to what we do.

Participant M recognized the link between the financial incentive for participation and participants’ perception of the value placed on the initiative by the institution.

Professionals are more likely to engage in initiatives they perceive as valuable to themselves and to the organization (Goffe & Jones, 2009; Senge, 1990). Participants in this case study often noted, in fact, that their perception of the initiative’s value to the university and UCF’s president encouraged their involvement. Universities involved in broad-based changes,

then, can encourage participation by showing both administrative and financial support for those changes.

Shared Leadership or Empowerment

Encouraging stakeholders to make decisions in the initiative empowered stakeholders.

The implications for leadership in this study go beyond the roles of administrators. Although initial administrative decisions in the organization of the QEP laid the groundwork for the initiative's success, leadership occurred at many levels. First, librarians who initially put forth the white paper for the initiative took leadership roles in recognizing the problem and the need to define that problem in broader information fluency terminology. Their leadership recognized the importance of including the concerns for critical thinking and technology in the original white paper. Additionally, faculty leadership in the implementation of the initiative encouraged collaboration within the community. Faculty leadership also focused the initiative on academic scholarship by implementing the Information Fluency Conference and Information Fluency Journal. During the process of the planning, development, and implementation of the initiative, then, participants took on the roles of leaders as that leadership was deemed necessary.

Encouragement for the Scholarship of Teaching and Learning

Leaders on the reaccreditation team shaped the QEP requirement to engage participants in a process meaningful for both institutional compliance and individuals' professional growth.

A primary expectation for faculty in the university is to further understanding of their fields through research (Boyer, 1990). Increasingly, however, recognition has been given to widening the definition of research to include "other forms of scholarship—teaching, integration, and application" (Boyer, 1990, p. 75). This scholarship of teaching can "frame that work [teaching] in terms of systematic inquiry and assessment—and engage in an important way of gaining

accurate, substantiated knowledge about teaching and learning” (Hassel, 2013, p. 178). The present study demonstrated the value of such inquiry and the value participants placed on their growth in teaching.

UCF’s Information Fluency Initiative encouraged participants to engage in the scholarship of teaching and learning on many levels. First, participants could attend the fall and summer faculty teaching and learning conferences to increase their own understandings of information fluency. Additionally, participants were encouraged to apply for individual project grants to develop curriculum for individual classes. There were also significant efforts to develop curriculum that would improve information fluency across programs. Additionally, the Information Literacy Modules encouraged cooperation across disciplines and programs to construct university-wide instruction to improve students’ skills. Finally, the Information Fluency Conference and the *Journal of Information Fluency* encouraged the development of scholarship around the topic of information fluency.

Three points salient to the learning organization appeared in the data concerning the development of scholarly research for teaching and learning at UCF. First, participants noted that the initiative met a real need in the university. As Senge (1990) noted, people become interested in actions for change when they see a need for that change. Participants’ recognition of the importance of information fluency to students’ success in their classes and at the institution demonstrated this aspect of the learning organization. Secondly, participants often commented on the voluntary nature of the initiative. Because professionals are more likely to participate willingly in learning communities when that participation is voluntary (Friend & Cook, 2007), the initiative encouraged teamwork, a discipline in the learning organization that relies upon effective collaborations. Finally, participants described valuable learning that

occurred through collaborations with individuals from other disciplines and programs, reflecting Senge's emphasis upon systems thinking or the interrelatedness inherent in the learning organization. Noted here were the benefits of the collaboration in fostering participants' understandings of other fields and understandings of the university organization. Thus, universities wishing to implement curricular change should encourage the scholarship of teaching and learning by determining the real needs of faculty, ensuring that participation is voluntary and encouraging collaboration across disciplines and programs.

Limitations and Suggestions for Further Research

The student experience would yield a more complete understanding of the effectiveness of the Information Fluency Initiative. This case study was exploratory and descriptive in nature. As such, the study was limited to describing the planning, development, and implementation of UCF's Information Fluency Initiative. Because the study was limited in scope and did not involve assessments or interviews with students, knowledge is limited to the perspectives and understandings of teaching faculty, librarians, and administrators involved in the initiative. Therefore, further study of the student experience through interviews and observations might yield heuristic understandings of the perceptions of students who participated in the information fluency curriculum. Additionally, although programs and individual participants conducted assessments, no university-wide pre-and post-assessments have been conducted. Such assessments might yield an understanding of the initiative's success in improving students' information skills institution-wide.

A follow-up study would determine the sustainability and inclusiveness of the initiative. This study sought to describe the five-year span of the initial QEP. The study involved a specific framework of time during which UCF developed and supported a community of faculty,

librarians, and information technology professionals who shared a common goal—to improve students’ critical thinking and information literacy skills needed to access, evaluate, and use sources found primarily through technological venues. Because it focused on development of a professional learning community, the initiative proved valuable to the participants interviewed and reflected a cultural shift in their understandings of the challenges students face in their academic writing. However, change in a large university—as noted in the literature and in interviews—is difficult and challenging. The initiative had not engaged the entire faculty nor had it included every discipline in the university. Therefore, a longitudinal study of this initiative would demonstrate if the institution had changed fundamentally and deeply in its approach to information fluency within the ethos of UCF. Additionally, because the boundaries of the case limited interviews to participants in the initiative, interviewing those faculty who chose not to participate in the initiative might yield valuable insight for those wishing to increase participation in such initiatives.

A collective case study would further understanding. This case study provided insights into one particular institution’s information fluency program. Multicase or collective case studies provide greater perspective into a particular phenomenon (Merriam, 2001). A collective case study may also further refine understandings of that phenomenon (Stake, 1995). Therefore, a collective case study of multiple information literacy programs could provide further perspectives and understanding of how universities approach the need to improve information literacy skills.

Conclusions

Several field notes collected while observing the final session of the information fluency strand at UCF's summer faculty conference served to contextualize the conclusions drawn from this study.

May 9, 2012:

The humanities team is designing methods to help students create projects in digital spaces while determining how to judge those projects.

A team of English teachers has developed a syllabus for a research writing course for literature. They speak about going to a session during the conference where a librarian has introduced the information literacy modules. They will embed the modules into the new course they are planning.

Another group wants to determine if students clearly understand online course goals. This group will develop a pre-and post-test to assess students' expectations and coordinate with the CDL (Center for Distributive Learning) to embed assessments of learning outcomes into online courses.

A member of the Information Fluency Office tells the group that this ability to share information is one of the great benefits of the faculty conference and suggests that sometimes sharing stories with one another increases the amount of information learned because faculty can share what "worked and didn't work" in their own classes.

The summer faculty conference was ending. The groups were engaged and enthusiastic about the work they were planning—work that cuts across many departments and curricula. This closing session provided a snapshot of the Information Fluency Initiative—an initiative that encouraged collaborations among stakeholders to improve information fluency at UCF and fostered the development of a sense of professional community.

This study resulted in several conclusions. First, complexities abound in addressing the problem of student academic writing. The information-rich world in which students work has an

array of sources from which to choose, a situation that may be confusing to them. Although the university community expects students to use credible and valid sources to inform research writing, many students lack the skills needed to identify, evaluate, and use those sources. Constructive and collaborative faculty efforts to develop curriculum, however, become the first steps for improving students' skills.

Secondly, the complexities of the university community itself challenge any broad-based attempt to resolve the issues surrounding student academic writing. Often, in fact, professionals in the university identify with their disciplines more than the university (Goffee & Jones, 2009). Additionally, disciplines might define information literacy needs differently. Consequently, getting faculty buy-in for cross-discipline collaboration often depends upon showing them that a need does exist and that collaboration will prove valuable. With the foundation of authentic buy-in, the Information Fluency Initiative was able to develop curricula and support specific projects that, in turn, focused on student learning.

Finally, analysis of the data from this study suggested that the formation of learning communities at the university level is possible when certain conditions exist. Certain circumstances converged at the University of Central Florida to support the development of the Information Fluency Initiative. First, the SACS Quality Enhancement Plan required the school to recognize a need for student learning and to support a broad-based initiative to meet that need. Two elements of the university were in place that helped the school's ability to identify a need that many in the community could support. First, the university supported a culture of assessment. The Center for Distributed Learning provided the QEP planning committee with data regarding student engagement and current abilities. Additional research through surveys and focus groups added to these data. Consequently, research by the QEP committee identified a

real need—that students at UCF needed to improve information fluency. Many faculty then embraced the QEP because they recognized the value of the initiative to students, to the university, and in support their own teaching.

Secondly, the University of Central Florida has a history of encouraging collaborations to enhance the scholarship of teaching and learning. The Karen L. Smith Faculty Center for Teaching & Learning (FCTL) was created in 1998 through a faculty senate resolution (UCF, 2012a). The creation of the Center demonstrated the university's strong commitment to "the systematic and purposeful assessment of a research question on student learning" (Hassel, 2013, p. 178). In fact, data from interviews discussed in Chapter Four of this study showed that the university's support for this type of scholarship led participants to perceive value in the initiative.

This case study asked how one university planned, developed, and implemented an information literacy program. The collaboration among teaching faculty, librarians, and instructional technology personnel resulted in a community of learners committed to improving student academic writing. The development of that community was purposeful and driven by careful decision-making by leaders to encourage collaboration across disciplines and programs. The initial recognition that the culture of the university is diverse and peopled with highly motivated and talented individuals led to a community driven by shared leadership and a vision to improve student learning. The process itself was valuable and resulted in personal growth for participants, ultimately creating a community of learners.

Participants in UCF's Information Fluency Initiative experienced growth in both personal and professional areas. Additionally, the initiative's primary focus—to increase students' information fluency skills—reached beyond the purposes of the university to encourage real-life skills. The university chose a problem that connected everyone in the initiative to something

important not only to the university but also more broadly to modern society. Dewey (1944) stated “The value of school education is the extent in which it creates a desire for continued growth and supplies means for making the desire effective in fact” (p. 53). The Information Fluency Initiative at the University of Central Florida is an example of how work can be done that meets an important need to graduate students ready to participate in the 21st Century.

Summary

Chapter Five reviewed the purpose of this case study of UCF’s Information Fluency Initiative and summarized the review of the literature. The chapter discussed methodologies for data collection and described findings from data analysis. Three themes identified from the analysis as important to the study were: (a) Thoughtful decision in the process of the initiative acknowledged the culture of the institution; (b) the initiative led to an increased library presence in the university community, and (c) the process itself was valuable and resulted in personal growth for participants, ultimately creating a community of learners.

This chapter closed with recommendations for practice. These included methods to increase students’ information fluency, the description of a new, dynamic relationship between faculty and librarians, and discussion of the processes for forming professional learning communities in universities. Additionally, implications for leadership included valuing participation, financial and administrative support for initiatives and encouraging the scholarship of teaching and learning. Chapter Five also recognized limitations of the study and gave suggestions for further study.

Appendix A
Letter to Information Fluency Office Director

Dear Dr. Marinara:

My name is Susan Slavicz and I have been a member of the English faculty at Florida State College at Jacksonville for twenty-three years. I am also a student enrolled in the Educational Leadership doctoral program at UNF. As part of the requirements for my degree, I am conducting a research study on how one university has developed an institutional program to improve students' information literacy abilities.

The purposes of this study are (1) to understand the procedures an institution developed to initiate an institutional information literacy program, (2) to understand the procedures an institution developed to implement that program, and (3) to understand the experiences and perceptions of participants of the program.

UCF's organized approach to developing the vision for its information fluency QEP and its linking of critical thinking to technology and information literacy reflected the conceptual framework for this study which proposed a relationship between critical thinking, information literacy, and improved student writing.

I am requesting that your institution allow me to conduct a qualitative case study of UCF's Information Fluency initiative. The Information Fluency initiatives at UCF fit the requirements for a case study because the rigorous accreditation process has yielded data rich in information, not only as documentation but as a result of people working together in a complex environment to create a shared vision for their institution.

I would like access to understand key documents pertaining to the initiatives and would like to interview key participants in the initiative about their perceptions of the program. I would also like to observe pertinent meetings, if possible.

If you have any questions, you may talk to me at (904) 251-5701 or email sslavicz@fscj.edu. You may also contact my dissertation chair, Dr. Elinor A. Scheirer, at (904) 620-1803 or email her at escheire@unf.edu for further information.

Thank you very much for your consideration of this matter.

Sincerely,

Susan Slavicz

Appendix B

Permission from UNF's IRB



UNIVERSITY of
NORTH FLORIDA.

Office of Research and Sponsored Programs
1 UNF Drive
Jacksonville, FL 32224-2665
904-620-2455 FAX 904-620-2457
Equal Opportunity/Equal Access/Affirmative Action Institution

MEMORANDUM

DATE: February 28, 2013

TO: Ms. Susan Slavic

VIA: Dr. Elinor Scheirer
LSCSM

FROM: Dr. Krista Paulsen, Chairperson
On behalf of the UNF Institutional Review Board

RE: Review of New Project Revisions by the UNF Institutional Review Board IRB#414638-2:
"University of Central Florida's Information Fluency Initiative: A Case Study"

UNF IRB Number: 414638-2
Contingent Approval Date: 02-27-2013
Final Approval Date: 02-28-2013
Expiration Date: Exempt - None
Processed on behalf of UNF's IRB <i>kc</i>

This is to advise you that your project, "University of Central Florida's Information Fluency Initiative: A Case Study" was reviewed on behalf of the UNF Institutional Review Board and has been declared Exempt, Category 2." Therefore, this project requires no further IRB oversight unless substantive changes are made.

The UNF IRB now understands that the IRB at the University of Central Florida (UCF) will not require review and approval prior to study initiation. Therefore, the contingency has been lifted and data collection may now begin at approved locations (i.e., UCF). This approval applies to your project in the form and content as submitted to the IRB for review. All participants must receive a stamped and dated copy of the approved informed consent document. Any variations or modifications to the approved protocol and/or informed consent forms that are substantive or might increase risk to human participants must be submitted to the IRB prior to implementing the changes. Please see the UNF Standard Operating Procedures for additional information about what types of changes might elevate risk to human participants. Any unanticipated problems involving risk and any occurrence of serious harm to subjects and others shall be reported promptly to the IRB within 3 business days.

Your study has been approved as of 2/28/2013. Because your project was approved as exempt, no further IRB oversight is required for this project unless you intend to make a change that is considered substantive or might elevate risk to participants. As an exempt study, continuing review will be unnecessary. When you are ready to close your project, please complete a Closing Report Form which can also be found in the documents library called "Forms and Templates" in IRBNet.

As you may know, **CITI Course Completion Reports are valid for 3 years.** Your completion report is valid through 10/07/2014 and Dr. Scheirer's completion report expires 10/08/2013. Please note that Dr. Scheirer's

CITI completion report will expire this year. Although CITI sends out reminders 90 days prior to expiration, it is the investigator's responsibility to complete the refresher course when it becomes available. An additional reminder will be sent within 30 days of CITI expiration. If your completion report expires within the next 60 days or has expired, please take CITI's refresher course by following this link: <http://www.citiprogram.org/>. Should you have questions regarding your project or any other IRB issues, please contact the research integrity unit of the Office of Research and Sponsored Programs by emailing IRB@unf.edu or calling (904) 620-2455.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within UNF's records. All records shall be accessible for inspection and copying by authorized representatives of the department or agency at reasonable times and in a reasonable manner. A copy of this approval may also be sent to the dean and/or chair of your department.

UNF IRB Number: 414638-2
Contingent Approval Date: 02-27-2013
Final Approval Date: 02-28-2013
Expiration Date: Exempt - None
Processed on behalf of UNF's IRB <i>KCC</i>

Appendix C

Permission from UCF's IRB

RE: Discussion with Joanne Muratori

<https://by2prd0610.outlook.com/owa/?ae=Item&a=Open&t=I...>

Reply Reply All Forward Chat

RE: Discussion with Joanne Muratori

Joanne Muratori

Tuesday, February 05, 2013 4:10 PM

To: Slavicz, Susan; Institutional Review Board [irb@ucf.edu]**Cc:** Scheirer, Elinor - Instructor; Sophia Dziegielewski
Patria Davis Felicea Van

You replied on 2/6/2013 8:52 AM.

TO: Susan Slavicz

Per our phone conversation this afternoon, the UCF IRB reviews studies for approval when they are conducted by UCF faculty, students, and research staff members. In such cases, UCF is engaged in the research. You have submitted your study proposal to the IRB at your institution, as required. When you receive IRB approval, you should contact Dr. Marinara and ask her permission to recruit others in her program as research participants. You plan is to interview faculty and librarians and, given the topic, the UCF IRB would likely make a determination of Exempt, category #2. In such cases, researchers use the IRB template for Exempt research which provides potential participants with the study title, purpose of the study, what they will be asked to do, how long it will take, and the contact information of the researcher(s), and IRB contact information. Each participant is given a copy of the consent document to read, ask questions, and keep for their records. Participants agree to take part (or not) and do not need to sign a consent form. If you plan to audio record the interviews, you should inform participants and include information on how the recordings will be securely stored, who will have access to the recordings, and when the recordings will be erased/ destroyed – after transcription, analysis, or when the study has been completed.

As noted in our conversation, each IRB has their own policy and procedure for handling requests from researchers from other institutions. At one point we reviewed the materials approved by the researcher's IRB and issued a letter, but now we instruct researchers to do what you are doing.

If you have additional questions, please let me know.

Best wishes on the success of your study.

Regards,

Joanne Muratori, M.A., CIM
IRB office

University of Central Florida
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, FL 32826-3246
Phone: 407-823-2901
Fax: 407-823-3299

1 of 1

2/6/13 8:52 AM

Appendix D
Letter to Potential Participants

Dear _____:

My name is Susan Slavicz and I have been a member of the English faculty at Florida State College at Jacksonville for twenty-three years. I am also a student enrolled in the Educational Leadership doctoral program at UNF. As part of the requirements of my degree, I am conducting a research study on how one university has developed an institutional program to improve students' information literacy abilities.

You are invited to participate in this study. Data is being collected from approximately 10-15 people who participated in the planning and implementation of the Information Fluency initiative at UCF. The purposes of this study are: (1) to understand the procedures an institution developed to initiate and institutional information literacy program, (2) to understand the procedures an institution developed to implement that program, and (3) to understand the experiences and perceptions of participants of the program.

If you choose to participate, you will be asked to complete an interview for about 90 to 120 minutes. In particular, you will be asked questions about your role and experiences in the development and implementation of UCF's Information Fluency plan. The meeting will take place at a mutually agreed upon time and place. The interview will also be audio-taped so that I can accurately reflect on what is discussed. Additionally, you may be observed while taking part in Information Fluency Initiative meetings.

As a participant, you may access your transcription or participate in the analysis of data to ensure accurate and fair reporting by receiving a copy of the transcribed data. Care will be taken to insure the confidentiality of the data. Participants will be able to insure accuracy through editing the interview transcripts. Digital audiotapes of interview sessions will be stored on at least two secure servers that are password-protected. After transcription of the audiotapes from interviews and of the field notes, all data will be stored on the secure servers. The data will be accessible only to me and to my major professor, and the original field notes and the audiotapes will then be destroyed. Participants, other than the program director, will be given pseudonyms to assist in providing confidentiality, and lists of participants' names and their pseudonyms will be kept on a secure server accessible only to me and my major professor.

Taking part in the study is voluntary. You may withdraw from participation at any time or decide not to answer any question you are uncomfortable answering. The results of the study may be published or presented at professional meetings, but your identity will not be revealed.

There are no direct benefits to you from your participation in this study; however, I hope that you choose to participate. A purposeful sample is needed to assure that data are representative of this phenomenon. This study is beneficial to higher education because you will be adding to an area of education that is under-represented and under-researched.

We will be happy to answer any questions you have about this study. You may talk to me at . You may also contact my dissertation chair, Dr. Elinor A. Scheirer, at or email her for further information. If you have any questions about your rights as a research participant, you may contact the chairperson of the Institutional Review Board at the University of North Florida, Dr. Katherine Kasten, at or email her at

Thank you for your consideration. If you would like to participate, please email me stating your interest and I will email you further instructions regarding the completion of an informed consent form.

With kind regards,
Susan Slavicz

Appendix E

Human Research Consent Form

Dear Participant,

Hello, my name is Susan Slavic, and I am a graduate student at the University of North Florida. As part of fulfillment for requirements for the Doctoral program in Educational Leadership from the University of North Florida, I am conducting research of an institution that has developed an institutionalized information literacy program in order to understand how that program was planned and implemented.

You have been asked to participate in this study because you have participated in the planning or implementation of UCF's Information Fluency Initiative. Participation is voluntary. If you agree to participate in the program, please sign and return the attached form. If you participate in this project, you will take part in an interview. I expect that participation in this study will take about 90 minutes to 120 minutes of your time. Additionally, you may be observed while taking part in Information Fluency Initiative meetings.

Your responses will be confidential. To prevent individual identification, pseudonyms will be used. There is no foreseeable reason to conclude that injury will result from your participation in this study. Participation is voluntary, and there are no penalties for skipping questions or withdrawing your participation. Thus, you may choose to withdraw from this study at any time.

You will be told of important new findings or any changes in the study or procedures that may affect you. You do not give up any of your rights by taking part in this study. Data from this study may be published or used in publications. However, your name will not be disclosed or sent outside of UNF without written permission unless in a court order of law.

This interview will be audio-taped. Only the researcher and the transcriber will have access to the taped interview and data will be uploaded to a secure server. You may access the transcriptions or participate in the analysis of data to ensure accurate and fair reporting of data. Data may be used for future research publications.

You may talk to my dissertation chair, Dr. Elinor A. Scheirer, at any time about questions and concerns you may have about this study. You may contact Dr. Scheirer at the University of North Florida, or email her at . You may also obtain further information about UNF policies, the conduct of this study, the rights of research subjects, or, if you suffer injury related to your participation in this research project from the Institutional Review Board Chairperson, Dr. Katherine Kasten, at or email her at

Although there are no direct benefits to or compensation for taking part in this study, others may benefit from the information gained from the results of this study.

Thank you for your consideration.

Sincerely,
Susan Slavicz
Phone:
Email:
Dr. Elinor Scheirer
Phone:
Email:

I _____ (print name) attest that I am at least 18 years of age and agree to take part in this study. A copy of this form was given to me to keep for myself.

Appendix F

Interview Questions

1. How long have you been involved with the information fluency initiative?
2. What part did you play in the program?
3. How was the university approaching the topic of information literacy before the development of the information fluency initiative? Who was involved? How were they involved in developing the information fluency initiative?
4. How did the university get to the point of information fluency?
5. How effective do you think the program is?
6. What have you learned from your experience in this program?
7. What do you do now that you didn't do before the program began?
8. How did you understand plagiarism before this program?
9. How do you understand plagiarism in the context of this program?
10. How did you understand information literacy before your experience with the program?
11. How do you understand information literacy in the context of this program?
12. How concerned were you with student writing before your experience with the program?
13. How concerned were you with plagiarism before your experience in this program?
14. How do you think that students perceive plagiarism?
15. How do you understand critical thinking?
16. How do you understand academic writing?
17. What should the relationship be between faculty and librarians? Has your opinion of this changed since you participated in this program? Could you explain your answer?
18. How do you think that students perceive information literacy?
19. What role should school leaders play in faculty/librarian collaboration?
20. What do students need in terms of information literacy?
21. What change do you see in how students learn about research and authorship today?
22. Faculty: What is your role in teaching information literacy? What is the role of librarians in teaching information literacy?
23. Librarians: What is your role in teaching information literacy? What is the role of faculty in teaching information literacy?
24. How did this process encourage people to develop a shared vision for your organization?
25. What would you now change about the program?
26. What would you like to add about your experience with the Information Fluency Program that we have not covered? In particular, have you changed policies in your department concerning information literacy or plagiarism?

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